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ABSTRACT

The statewide school survey monitors trends in substance use among public school students, identifies emerging problem areas, and serves as a basis of comparison for local school surveys. Chapter 1, "Description of Survey and Study Limitations," includes a brief history, survey methods, and terminology. Chapter 2 presents a "Comparison to the 1996 Secondary School Survey." Chapter 3, "Drug-Specific Patterns of Use," covers tobacco, alcohol, inhalants, and marijuana use. Data on patterns of use and attitudes are presented. Chapter 4, "Demographic Variables and Substance Use," explores gender, race and ethnicity, school grades, and family structure in relation to substance use. A large increase in use between fifth and sixth grades indicates experimentation beginning in the sixth grade for many students. Chapter 5, "Other Factors Related to Substance Use," presents data on school problems, friends who are users, availability, perceived danger, parental attitudes, age of first use, and sources of information. Conclusions are presented in Chapter 6. The survey instrument, substance use prevalence tables, and tables of responses to selected questions are appended. A separately bound executive summary presents the highlights of the study. (EMK)

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Texas Commission on
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1996 Texas School Survey of Substance Use Among Students: Grades 4-6

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1996 Texas School Survey of Substance Use Among Students: Grades 4-6

Liang Y. Liu, Ph.D.

Texas Commission on Alcohol and Drug Abuse
Summer 1997

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Table of Contents

List of Figures ..... *v*

List of Tables ..... *vi*

Executive Summary *1*

Chapter 1: Description of Survey and Study Limitations

A Brief History 5
Survey Methods 6
Sampling 6
Instrumentation 6
Administration 6
Terminology 7
Limitations 8
Scope 8
Self-Reported Data 8
Sampling Error 9

Chapter 2: Comparison to the 1996 Secondary School Survey *11*

Chapter 3: Drug-Specific Patterns of Use

Introduction 13
Tobacco 14
Alcohol 16
Consumption of Specific Beverages 18
Frequency of Heavy Alcohol Consumption 18
Inhalants 20
Specific Inhalants 21
Use of Multiple Inhalants 23
Marijuana 23
Availability, Attitudes, and Peer Use of Marijuana 25

Chapter 4: Demographic Variables and Substance Use

Introduction 27
Gender 27
Race/Ethnicity 29
Grades Earned in School 31
Family Structure 33

Socioeconomic Status 34
Length of Residence in Town 35
Grade Level 35

Chapter 5: Other Factors Related to Substance Use

Introduction 37
School Problems 37
Close Friends Who Use 38
Substance Availability 39
Perceived Danger 41
Relative Danger Associated With Substance Use 44
Changes in Perceptions of Danger 44
Perceived Parental Attitudes 44
Age of First Use 46
Sources of Information 47

Chapter 6: Conclusions 49

Appendix A: Survey Instrument 51

Appendix B: Prevalence Tables 57

Appendix C: Additional Tables 65

List of Figures

Chapter 2: Comparison to the 1996 Secondary School Survey

Figure 1 Percentage of Students Who Had Used a Substance in the Past School Year, by Family Income Level and Grade: Texas Elementary and Secondary Students, 1996 12

Chapter 3: Drug-Specific Patterns of Use

Figure 2 Trends in Past-Year Use of Substances Among Texas Elementary Students: 1990, 1992, 1994, and 1996 14
Figure 3 Percentage of Texas Elementary Students Who Had Used Cigarettes and Smokeless Tobacco in the Past School Year, by Grade: 1996 15
Figure 4 Percentage of Texas Elementary Students Who Had Used Alcohol in the Past School Year, by Grade: 1990, 1992, 1994, and 1996 16
Figure 5 Percentage of Texas Elementary Students Who Had Ever Used Alcohol, by Ethnicity: 1990, 1992, 1994, and 1996 17
Figure 6 Percentage of Texas Elementary Students Who Had Ever Used Specific Alcoholic Beverages, by Grade: 1996 18
Figure 7 Consumption of Two or More Drinks in a Row at Least Once During the Past School Year, Fourth and Fifth Graders Combined: 1990, 1992, 1994, and 1996 20
Figure 8 Percentage of Texas Elementary Students Who Had Ever Used Specific Inhalants, by Grade: 1996 22
Figure 9 Percentage of Texas Elementary Students Who Had Ever Used Inhalants, by Grade and Number of Different Types: 1996 23
Figure 10 Lifetime and Past-Year Use of Marijuana Among Texas Elementary Students, by Grade: 1996 24
Figure 11 Percentage of Texas Elementary Students Who Had Used Marijuana in the Past School Year, by Grade: 1990, 1992, 1994, and 1996 24
Figure 12 Percentage of Texas Sixth Graders Who Said Marijuana Was Very/Somewhat Easy to Get, Very Dangerous to Use, and Some/Most of Their Friends Used Marijuana: 1992, 1994, and 1996 25

Chapter 4: Demographic Variables and Substance Use

Figure 13 Percentage of Texas Elementary Students Who Had Used Substances in the Past School Year, by Race/Ethnicity: 1996 29
Figure 14 Percentage of Texas Elementary Students Who Had Used Alcohol in the Past School Year, by Race/Ethnicity and Grade: 1996 30
Figure 15 Percentage of Texas Elementary Students Who Had Used Marijuana in the Past School Year, by Academic Status and Grade: 1996 32
Figure 16 Percentage of Texas Elementary Students Who Had Used Substances in the Past School Year, by Family Structure: 1996 33
Figure 17 Percentage of Texas Elementary Students Who Had Ever Used Substances, by Grade: 1996 35

Chapter 5: Other Factors Related to Substance Use

Figure 18 Percentage of Texas Elementary Students Who Said Some/Most of Their Close Friends Used Various Alcoholic Beverages, by Grade: 1996 38

Figure 19 Percentage of Texas Elementary Students Who Had Obtained Alcohol From Various Sources, by Grade: 1996 40

Figure 20 Percentage of Texas Elementary Students Who Thought It Was Very Dangerous to Use Various Substances, by Grade: 1996 42

Figure 21 Percentage of Texas Elementary Students Who Said Their Parents Did Not Like Kids Their Age to Use Marijuana, by Grade: 1990, 1992, 1994, and 1996 45

Figure 22 Percentage of Texas Elementary Students Who Had Received Information on Substances from Various School Sources: 1990, 1992, 1994, and 1996 48

List of Tables

Chapter 1: Description of Survey and Study Limitations

Table 1 Total Number of Respondents to the 1996 Texas School Survey, by Grade and Demographic Characteristics 7

Chapter 3: Drug-Specific Patterns of Use

Table 2 Frequency of Heavy Alcohol Consumption Among Texas Elementary Students, by Grade: 1996. 19

Table 3 Percentage of Texas Elementary Students Who Had Ever Used Specific Inhalants: 1990, 1992, 1994, and 1996 22

Chapter 4: Demographic Variables and Substance Use

Table 4 Percentage of Texas Elementary Students Who Had Used Substances in the Past School Year, by Gender and Grade: 1996 28

Table 5 Percentage of Texas Elementary Students Who Had Ever Used Substances, by Race/Ethnicity: 1994 and 1996 30

Table 6 Percentage of Texas Elementary Students Who Had Used Substances, by Usual Grades Received in School: 1996 32

Table 7 Percentage of Texas Elementary Students Who Had Used a Substance in the Past School Year, by Socioeconomic Variables and Grade: 1996 34

Chapter 5: Other Factors Related to Substance Use

Table 8 Percentage of Texas Elementary Students Who Had Been Offered Substances, by Grade: 1996 40

Table 9 Percentage of Texas Elementary Students Who Had Used Substances in the Past School Year, by Perceived Danger: 1996 43

Table 10 Responses of Texas Elementary Students to the Question, "How Do Your Parents Feel About Kids Your Age...": 1996 45
Table 11 Average Age of First Use of Substances in Years, by Grade: 1996 46

Executive Summary

Introduction

Since its inception in 1988, the Texas School Survey has been a biennial collaborative effort between the Texas Commission on Alcohol and Drug Abuse (TCADA) and the Public Policy Research Institute (PPRI) at Texas A&M University to collect and analyze information on substance use among Texas youths. The statewide school survey monitors trends in substance use among public school students, identifies emerging problem areas, and serves as a basis of comparison for local school surveys which are conducted annually by various school districts throughout the state.

Although the survey of secondary students began in 1988, statewide data on elementary students was not gathered until 1990. The 1996 Texas School Survey results for elementary students were based on the responses of 68,239 students in fourth through sixth grades. In addition to the prevalence patterns of alcohol and drug use, this study addresses aspects of peer, parent, and school influences on substance use behaviors at a very early age when prevention and intervention is most effective.

Comparison to the 1996 Secondary Survey

- Texas elementary students in 1996 were about one-half as likely as Texas secondary students to report lifetime use of alcohol and one-third as likely to report lifetime use of tobacco.
- Only 4 percent of the elementary students had ever used marijuana, compared to 31 percent of secondary students.
- Compared to secondary students, more elementary students have no idea how their parents feel about substance use.

Drug-Specific Patterns of Use

- In 1996, one-quarter of elementary school students in Texas used some type of substance — tobacco, alcohol, marijuana, and/or inhalants during the past school year.
- Alcohol is the most widely used substance among Texas elementary students followed by tobacco. In 1996, slightly less than one-third of the students in grades four through six had ever drunk alcohol. Compared to 1994, fewer students reported past-year alcohol use. Some 15 percent of fourth graders, 19 percent of fifth graders, and 28 percent of sixth graders had consumed alcohol during the past school year.
- Heavy drinking is still of concern. The survey data show that 16 percent of elementary students had drunk two or more beers in a row at least once during the 1996 school year.

Substance use increased by grade, with sixth graders two to four times more likely to use tobacco, alcohol, and marijuana than fourth graders.

- Both lifetime and past-year use of tobacco among elementary students decreased from 1994 to 1996.
- Unlike secondary school students, lifetime marijuana use among elementary students decreased from 6 percent in 1994 to 4 percent in 1996. However, past-year use of marijuana among elementary students increased again in 1996 to 3 percent, continuing a trend that began in 1992.
- Sixth graders showed a large increase in past-year use of marijuana from 2 percent in 1992 to 5 percent in 1996.
- Prevalence of substance use increased with grade level. Sixth graders were two to four times more likely to have ever used tobacco, alcohol, and marijuana than fourth graders.
- Nine percent of fourth graders, 8 percent of fifth graders, and 12 percent of sixth graders had ever used inhalants. Correction fluid and glue continue to be the two most popular inhalants.

Demographic Variables and Substance Use

- Although male elementary students were more likely than female students to use all substances, past school year use of marijuana for females doubled between 1994 and 1996. As the students get older, girls increase their substance use at a faster rate than boys.
- Family income is related to substance use among elementary students. Children from low income families were more likely to use substances than those from other families, although this pattern is not seen among secondary students. About 21 percent of fourth graders who qualified for a free or reduced-price lunch had used substances during the past school year, compared to 16 percent of those who did not qualify.
- Elementary students who lived with two parents were less likely to use substances than those who lived in other family situations.
- There is a noticeable difference in substance use between the fifth and sixth grades. This phenomenon may be partly because many sixth graders attend middle school campuses where they are exposed to substance use by older students. Moreover, as sixth graders become increasingly independent, they are more inclined to experiment with substances than younger students.
- Students who earned grades of C or lower reported two or three times as high a prevalence for all substances as students who earned A's and B's.
- African American youths ranked highest in lifetime use of alcohol, and Hispanics reported the highest levels of tobacco, inhalant, and marijuana use.
- African American students showed the greatest decrease of any ethnic group in lifetime alcohol use from 1994 (45 percent) to 1996 (37 per-

cent) — a decrease of eight percentage points. Similar patterns held for past-year alcohol use.

Other Factors Related to Substance Use

- Students who had been sent to the principal or who had cut class were more likely to use substances than other students.
- Approximately 35 percent of elementary students said that some or most of their close friends drank alcohol, 13 percent said that at least some of their close friends used inhalants, and 12 percent said that at least some of their close friends used marijuana. The extent of peer use not only gives some indication of a student's opportunity to use substances but also indicates a high level of peer pressure as well.
- Some 28 percent of elementary students had been offered cigarettes or smokeless tobacco, 33 percent had been offered alcohol, and 10 percent had been offered marijuana.
- Wine coolers were thought to be the least dangerous of the four types of alcoholic beverages surveyed.
- About two-thirds of the students thought inhalants were very dangerous to use, while 80 percent thought that marijuana was very dangerous.
- The average age of first use was lowest for alcohol, ranging from 8.2 years for fourth graders to 9.5 years for sixth graders.
- More than 80 percent of elementary students felt that their parents strongly opposed their drinking beer, and 85 percent said their parents were strongly opposed to marijuana use.
- Elementary school students were most likely to get information about substances from school sources; however, this reliance on school information declined from sixth grade through high school. Three-fourths of elementary students said they got most of their information about substances from their teachers.

Approximately 35 percent of elementary students said that some or most of their close friends drank alcohol.

Conclusions

- Although rates of substance use among elementary students are fairly low, it should be remembered that these low percentages translate into large numbers of students. For example, by translating the rates of use into actual numbers, it is estimated that about 77,000 Hispanic elementary students, 65,000 Anglo elementary students, and 30,000 African American elementary students consumed alcohol in some form within the past year.
- Results from the 1996 survey suggest that prevention efforts should be directed toward preadolescents and take into account factors such as peer use and parent/family characteristics that may lead to the initiation and continuation of adolescent substance abuse.

Chapter 1: Description of Survey and Study Limitations

A Brief History

When the first Texas School Survey of substance use among secondary school students was conducted in 1988, it became clear that students started using substances in elementary school.

When the first Texas School Survey of substance use among secondary school students was conducted in 1988, it became clear that many students started using substances while still in elementary school. In that year, a significant proportion of seventh grade inhalant users claimed they had first used inhalants when they were ten years old or younger. However, the secondary school instrument was not appropriate for surveying elementary students. At six pages, it was too long to be completed by younger students in the required 15 to 20 minutes, and it asked about several substances rarely used by elementary students such as hallucinogens, uppers, and downers.

Early in 1989, the Texas Commission on Alcohol and Drug Abuse (TCADA) and the Public Policy Research Institute (PPRI) at Texas A&M University developed a survey instrument suitable for elementary students which maintained compatibility with the secondary instrument, but asked fewer questions about fewer kinds of drugs, and included fewer response categories. Questions about the perceived dangers of substance use were added to the survey form in 1990. That was also the year the statewide survey for elementary students began.

Four new questions were added to the 1992 elementary survey. In order to provide more information about the student's socioeconomic status, two questions asked students whether their parents had graduated from college and in what kind of home (i.e., house, apartment/duplex, or mobile home) they lived. The other two new questions addressed issues identified by school district personnel as being of particular interest. They asked students where they got alcoholic beverages and how long they had attended school in the same school district.

The 1994 elementary survey content remained basically the same as the 1992 survey, but had one new question. The question which indicated the student's socioeconomic status was changed from the type of home where the student lived to whether or not she/he qualified for a free or reduced-price school lunch. Also, the wording for the responses that followed the question about specific inhalant use was modified. The question read, "Have you ever sniffed any of the following inhalants to get high?" The phrase "to get high" was added to the responses. For example, the response which in 1992 read "Gasoline" was changed to "Gasoline *to get high*;" the response "Paint thinner" was changed to "Paint thinner *to get high*." It was thought that on previous surveys, some students may have answered that they had used a

specific inhalant when they had sniffed it unintentionally and not intending to get high.

Also, the question regarding the use of substances during the school year was modified to read "*Since school began in the fall*, how many times have you used [substances]?" In addition, one of the responses to the question was changed from "Never used it" to "Not used it." It should be noted that the modifications to the 1994 survey instrument possibly may have affected some of the variations in prevalence rates from 1992 to 1994, especially in the case of inhalants.

The 1996 elementary survey contained the same questions as those in 1994, except that some small changes for the responses were made. First, the ethnic subgroups of "Asian American" and "Native American" were added to the responses in the race/ethnic question (Appendix A, question 5). Secondly, the volatile substance of spray paint was added to the responses in question number 10 which queried students about specific inhalant use — the new response read, "Spray paint to get high."

Survey Methods

Sampling

The 1996 Texas School Survey was administered to 71,300 elementary students in 70 school districts statewide. As will be discussed below, some of the questionnaires were excluded from the results; therefore, this report is based on data collected from 68,239 elementary students (Table 1).

Students were randomly selected from school districts throughout the state using a multi-stage probability design. Stage one was the selection of districts; stage two, the selection of schools within the sampled districts; and stage three, the selection of classes within the sampled schools.

Instrumentation

All fourth, fifth, and sixth grade respondents in 1996 were questioned with the elementary survey instrument[1] (see Appendix A). The elementary student instrument is three pages long and covers four types of substances: 1) tobacco (including cigarettes and smokeless tobacco); 2)alcohol (including beer, wine, wine coolers, and liquor); 3) inhalants; and 4) marijuana. A pseudo-drug was also included in the questionnaire to help identify exaggerators and detect invalid responses. Recency of use questions distinguish users who have used in the current school year and those who have used prior to the current school year. Like the secondary instrument, the elementary instrument could be optically scanned and was designed for self-administration in a supervised setting.

Administration

To allow for resolution of scheduling conflicts and other potential difficulties, districts selected for inclusion in the state sample were contacted early on. They were initially notified of the project by mail, followed by a phone call to clarify the study objectives and to discuss in detail how the

Table 1 **Total Number of Respondents to the 1996 Texas School Survey, by Grade and Demographic Characteristics**

	Grade 4	Grade 5	Grade 6	Total
Total Sample				
Students	21,281	22,507	24,451	68,239
Gender				
Males	10,613	11,241	11,925	33,779
Females	10,649	11,239	12,484	34,372
Race/Ethnicity				
Anglos	7,889	8,202	9,946	26,037
African Americans	3,427	3,793	4,035	11,255
Hispanics	7,666	8,193	8,090	23,949
Asian Americans	400	412	602	1,414
Native Americans	400	411	317	1,128
Others	1,101	1,104	1,032	3,237
Usual Grades				
A's	8,253	7,828	8,576	24,657
B's	9,114	10,247	10,968	30,329
C's	2,601	3,274	3,594	9,469
D's	491	491	567	1,549
F's	388	267	277	932
Family Structure				
Live With Both Parents	14,343	14,507	15,692	44,452
Other Family Structures	6,717	7,801	8,566	23,084
Age				
Age 8 or Younger	44	9	3	56
Age 9	7,121	51	39	7,211
Age 10	12,415	7,090	153	19,658
Age 11	1,554	13,191	7,335	22,080
Age 12	64	1,999	14,255	16,318
Age 13 or Older	10	90	2,587	2,687

survey should be administered. Relevant personnel in the selected districts and campuses were provided with complete instructions and materials necessary to administer the survey. Teachers in selected classrooms were given a script to read so that all students would receive a standardized set of instructions. Teachers were also asked to provide information on the number of students that should have taken the survey but were absent, and the number that were present but failed to complete the survey. This information was useful for computing error estimates.

Terminology

Elementary students are those in grades four through six. Estimates for secondary students (those in grades seven through twelve) are presented in a separate report.

Prevalence refers to the percentage of students reporting use of a substance or substances at a given time. *School-year prevalence* refers to the

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percentage of students who had used substances within the current school year. *Not-past-year prevalence* refers to the percentage of students who used substances in the past but not within 12 months prior to the survey. *Lifetime prevalence* refers to the percentage of students who had used substances at least once in their life, regardless of when the substance was last used.

Recency of use refers to the last time a substance was used (e.g. within the current school year or prior to the current school year). *Frequency of use* describes how often use has occurred.

Limitations

Scope

The Texas School Survey results can be generalized only to public school students because only public school students were sampled in this project. Although they are an important component of the youthful population of Texas, neither private school students nor dropouts were represented. This limitation should be kept in mind when considering the implications of this data.[2] The findings in this study, however, do represent reasonable estimates of the extent of substance use among public school students. The survey procedure employed in this research is an appropriate technique for estimating the prevalence and frequency of various forms of drug use in the target population. A survey methodology appears to be the only feasible means for making estimates on these largely clandestine behaviors.

Self-Reported Data

Substance use estimates presented in this report are entirely based on self-disclosure. While many studies have established the usefulness of self-reported information for estimating the incidence and prevalence of drug use, the validity of these data ultimately depends on the truthfulness, recall, and comprehension of the respondents. This study was carefully designed to minimize the impact of these potential sources of error. Four percent of the questionnaires from the elementary sample were discarded because students either reported impossibly high levels of substance abuse or claimed to use a non-existent drug. If students failed to report both their age and grade level, the data were also dropped from the analyses. Other measures to reduce response bias included a full array of instrument construction, testing and review protocols, validity check procedures, and data processing protocols that have been developed over the past nine years on the basis of administering over 2 million surveys to public school students. For further information on these technical matters and tabular information necessary to estimate confidence limits, the reader may consult the separate technical report prepared by PPRI, *Methodology Report for the 1996 Texas School Survey of Substance Use.*[3]

Despite these precautions, some undetected under- and over-reporting may have occurred. However, any differences among subgroups in veracity, recall, or comprehension are likely constant over time. Any reporting bias in

the elementary data gathered in the four statewide surveys should be approximately equal in all survey years, making comparisons among elementary data gathered between 1990 and 1996 valid.

Sampling Error

The estimates presented in this study are based on a sample and hence are subject to sampling error. This survey was designed and drawn such that confidence limits on all estimates can be ascertained. However, the procedures required to estimate confidence limits in this project are more complex than can be summarized in a document intended for a general readership. Several factors contribute to this complexity:

- *Cluster-sampling:* Entire classrooms (as opposed to individual students) were randomly selected to participate in the survey. Textbook procedures for computing confidence intervals assume random selection of individual respondents, which was not the case for this study.
- *Weighting:* Some categories were oversampled, then the data were weighted to make it precisely reflect the demographic composition of Texas schools. Textbook procedures for computing confidence intervals assume all observations have equal weight, which was not true for this study.
- *Asymmetric Confidence Intervals:* Many estimates are 5 percent or less and require asymmetric confidence intervals. Asymmetric confidence limits adjust for the fact that the true rate in a population cannot be less than 0 percent or greater than 100 percent. For example, if an estimate was 1 percent, where the computed upper boundary of the 95 percent confidence interval is plus 2 percent, the lower boundary cannot be symmetrical (i.e., minus 2 percent) because it is impossible for fewer than zero people to have the characteristic. Procedures for computing asymmetric confidence intervals ensure that this paradoxical situation does not occur.

These factors must be taken into account to correctly compute confidence intervals on the estimates presented herein. The statistical basis for these computations and estimate of 95 percent confidence limits for this study are included in the *Methodology Report for the 1996 Texas School Survey of Substance Use*. The technical reader should refer to that document for additional information.

The Texas School Survey is based on a very large sample, and the estimates have a high degree of statistical precision relative to most published survey research that employs cluster sampling. For estimates regarding the elementary school population as a whole, the 95 percent confidence interval is at most plus or minus 2.6 percent. In other words, if the estimate based on the school survey sample is that 30 percent of elementary school students have used a substance, there is a 95 percent chance that the true population rate is between 27.4 percent and 32.6 percent. This estimate of sampling

error is conservative for estimates of rates on the elementary school population as a whole. Actual 95 percent confidence intervals on most substances are smaller.

Where rates are presented for subgroups of the elementary school population (e.g., gender, racial/ethnic groups, school grades, etc.) the sampling error is greater because the samples contain fewer observations. For example, the largest 95 percent confidence limit in any grade and on any substance is observed for alcohol in the fifth grade. In this case, the estimate of lifetime prevalence of use is 28.6 percent with the lower and upper boundaries of the 95 percent confidence interval of 24.1 percent and 33.5 percent, respectively. Confidence limits on all other substances in all other grades do not exceed this figure and in most cases are much smaller.

A composite estimate summarizes the behaviors of students in several grades. In this study, composite estimates for all subpopulations are computed by using standard proportional adjustments based on the overall proportion of elementary students in each grade. This procedure controls for the slight demographic variations that are present among subpopulations (e.g., female fourth graders comprise a slightly different proportion of all female elementary students than do male fourth graders of all male elementary students), and produces composite estimates that are directly comparable among subpopulations.

Estimates of inhalant use take into account responses to both specific questions (i.e., where actual substances are mentioned) and generic questions (i.e., where the term "inhalants" is used). However, the reader should be aware that the technical problems associated with querying inhalant use can affect results. As a rule of thumb for the elementary population, estimates of the prevalence of inhalant use are more reliable for the older students. In practical terms this means that estimates for sixth graders are more reliable than for fourth graders. Readers should take this into consideration when evaluating the data presented in the following chapters.

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[1] In 1990 and 1992, fourth and fifth grade respondents were questioned with the elementary survey instrument, whereas sixth graders were questioned with the secondary survey instrument. The two survey forms covered the same basic topic areas, but in some cases questions were asked differently. In 1994 and 1996, the elementary survey was administered to fourth, fifth, and sixth graders.

[2] Since the school survey samples only in-school students, it is likely that the study underestimates the prevalence of substance use in the adolescent population because school dropouts consistently have shown higher rates of substance use than those staying in school. See G. Globetti, "Teenage Drinking," *Alcoholism: Development, Consequences, and Interventions, Second Edition*, eds. N. J. Estes and M. E. Heinemann (St. Louis, Missouri.: The C. V. Mosby Co., 1982); W. B. Hansen, L. M. Collins, C. K. Malotte, C. A. Johnson, and J. E. Fielding, "Attrition in Prevention Research," *Journal of Behavioral Medicine* 8:3 (1985): 261-275; and L. Y. Liu, *Substance Use Among Youths at High Risk of Dropping Out: Grades 7-12 in Texas, 1992* (Austin, Tx.: Texas Commission on Alcohol and Drug Abuse, August 1994).

[3] J. A. Dyer and R. Menon, *Methodology Report for the 1996 Texas School Survey of Substance Use* (College Station, Tx.: Public Policy Research Institute, Texas A&M University, March 1997).

Chapter 2: Comparison to the 1996 Secondary School Survey

Only 4 percent of students in grades four through six had ever used marijuana, compared to 31 percent of students in grades seven through 12.

Because of the simplified nature of the elementary survey instrument, some of the questions used in the secondary survey were not used for elementary students. For example, only secondary students were asked how difficult it would be to get substances, but elementary students were asked simply whether they had ever been offered substances. Caution should be exercised when comparing these two versions of the survey. However, as much similarity as possible was retained between the elementary and secondary surveys, so that results over several problems were comparable.

In comparison to Texas secondary students in 1996, Texas elementary students were about one-half as likely to report lifetime use of alcohol (30 percent versus 73 percent) and inhalants (10 percent versus 20 percent). These younger students were about one-third as likely as the older students to have ever used tobacco (17 percent versus 55 percent). The largest disparity between elementary and secondary student substance use was for marijuana. Only 4 percent of students in grades four through six had ever used marijuana during their lifetime, compared to 31 percent of students in grades seven through 12.

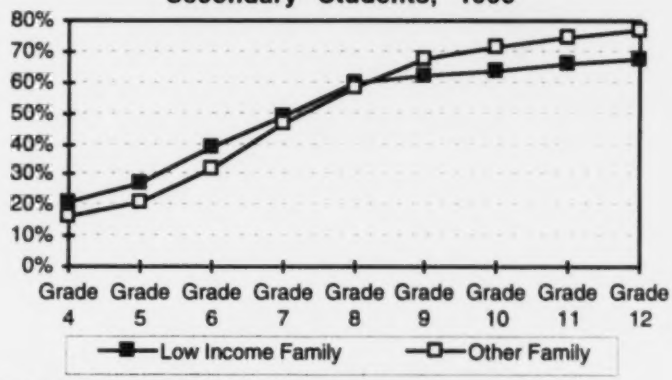
Differences in patterns of substance use between elementary and secondary students may result partly from the differences in the students' perceived danger of using substances. More elementary students believed that substances were very dangerous to use than did secondary students in 1996. For example, 80 percent of students in grades four through six thought it was very dangerous to use marijuana in comparison to 60 percent of students in grades seven through twelve (68 percent versus 44 percent for alcohol; 65 percent versus 39 percent for tobacco). However, fewer elementary students believed that inhalants were very dangerous for kids their age to use as compared to secondary students (67 percent versus 76 percent). This may be explained by the fact that many younger students taking the survey possibly did not fully comprehend what "inhalants" were.

It is not surprising that elementary students were more likely to be unaware of the attitudes of their parents toward substance use than were secondary students. In 1996, about 16 percent of all elementary students did not know how their parents felt about kids their age drinking beer, compared to only 9 percent of all secondary students (13 percent versus 8 percent about using marijuana). The older adolescents may better know the attitudes of their parents because as children get older, parents must often confront substance use by their children and make their views known.

About 21 percent of fourth graders who qualified for a free or reduced-price school lunch used a substance during the past school year, compared to 16 percent of their counterparts.

Family income is related to substance use among elementary students, such that children from low-income families were more likely to use substances than those from other families. About 21 percent of fourth graders who qualified for a free or reduced-price school lunch had used a substance (either tobacco, alcohol, inhalants, or/and marijuana) during the past school year, compared to 16 percent of their counterparts (Figure 1). This pattern was true for fifth and sixth graders as well. However, no relationship between substance use and family income level was found among secondary students. This pattern of higher substance use, which may reflect environmental pressures associated with poverty, occurs in grades seven and eight but not in the upper grades. That this pattern is not apparent among older students may be explained by the fact that students who use substances in the lower grades are inclined to drop out, and dropping out is correlated both with socioeconomic class and substance use.

Figure 1 **Percentage of Students Who Had Used a Substance* in the Past School Year, by Family Income Level and Grade: Texas Elementary and Secondary Students, 1996**



* Tobacco, alcohol, inhalants, or/and marijuana.
Note: Data for grades seven through 12 is based on the 1996 Texas Secondary School Survey.

Chapter 3: Drug Specific Patterns of Use

Introduction

In 1996, one-quarter of all elementary students in Texas used tobacco, alcohol, inhalants, and/or marijuana during the past school year.

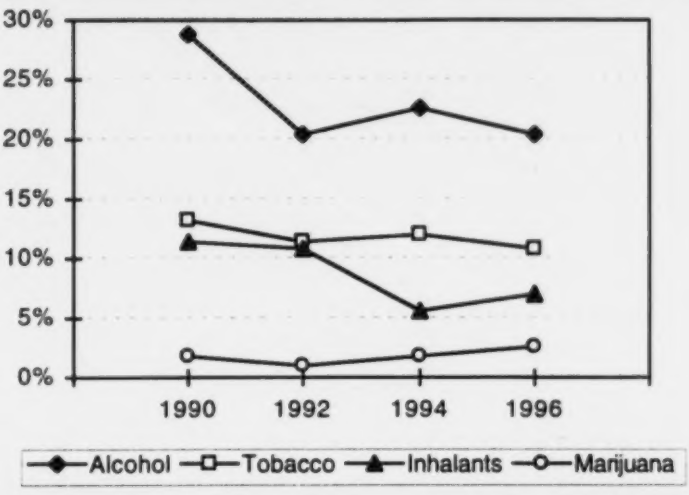
Although prevalence use of substances among elementary students is quite low compared to secondary students, it is in the elementary grades that many students are exposed to alcohol and drugs for the first time. About 42 percent of fourth and fifth graders who had the opportunity to try cigarettes actually did so. Seven percent of all sixth graders had already tried marijuana, and 40 percent of sixth graders had drunk alcohol at least once. In 1996, one-quarter of all elementary students (18 percent of fourth graders, 24 percent of fifth graders, and 34 percent of sixth graders) in Texas used tobacco, alcohol, inhalants, and/or marijuana during the past school year.

Lifetime marijuana use among elementary students decreased from 1994 to 1996, yet past-year use of marijuana continued to rise in 1996 and reached the highest level over the past four surveys (Appendix B, Table B1). Fewer elementary students in 1996 reported lifetime use of alcohol and tobacco than in 1994, while the same percentage of students said they had used inhalants at least once. Also between 1994 and 1996, past-year use increased for inhalants, but not for tobacco and alcohol.

Although the lifetime prevalence rate for marijuana decreased from 5.6 percent in 1994 to 4 percent in 1996, it was more than double the rate of 1.7 percent in 1992. Unlike lifetime use rates, the percentage of elementary students who admitted using marijuana within the past school year increased again in 1996 to 2.7 percent, continuing a trend that began in 1992 at 1 percent (Figure 2). Past-year use of tobacco among elementary students was 11 percent in 1996, about 1 to 2 percentage points lower than in previous years. Twenty-one percent of all elementary students in 1996 reported past-year alcohol use, the same as in 1992, but down from 29 percent in 1990.

Alcohol remained the most widely used substance by elementary students, and heavy alcohol drinking among youths is still of concern. Heavy alcohol use is defined in the elementary school survey as the consumption of two or more drinks in a row, a large amount for elementary students. In contrast, heavy drinking in the secondary school survey is defined as consuming five or more drinks at one time. Thirty-seven percent of lifetime alcohol users in grades four to six said they first used alcohol by eight years of age. About 16 percent of elementary students had drunk two or more beers in a row at least once during the 1996 school year, and 4 percent claimed doing so three or more times.

Figure 2 **Trends in Past-Year Use of Substances Among Texas Elementary Students: 1990, 1992, 1994, and 1996**



Substance use increased with grade level, with six graders reporting two to four times more lifetime use of tobacco, alcohol, and marijuana than fourth graders (Appendix B, Table B2). For example, some 7.3 percent of sixth graders surveyed in 1996 reported lifetime marijuana use, compared to only 1.7 percent of fourth graders. Nine percent of fourth graders, 8 percent of fifth graders, and 12 percent of sixth graders said they had tried inhalants at least once. Among specific inhalants, correction fluid was the most frequently used inhalant by sixth graders, whereas glue was the favorite of fourth and fifth graders.

Tobacco

Among Texas elementary students, tobacco is the second most widely used substance, following alcohol.

Tobacco is included in the Texas School Survey because of its addictive properties and its widespread use. It is considered an entry-level or "gateway" drug because tobacco is often the first substance used in a progression to other substances. The tobacco category in the prevalence tables shown in Appendix B includes the use of both cigarettes and smokeless tobacco. Among Texas elementary students, tobacco is the second most widely used substance, following alcohol in popularity. In 1996, 17 percent of all elementary students reported having used some type of tobacco product in their lifetime. Lifetime tobacco use was 9 percent among fourth graders, 16 percent among fifth graders, and 26 percent among sixth graders. About 11 percent of all elementary students had used tobacco during the past school year (6 percent of fourth graders, 10 percent of fifth graders, and 17 percent of sixth graders). The average age reported for the first use of tobacco among sixth graders was 9.9 years, earlier than the age of first use of any other substance except alcohol.

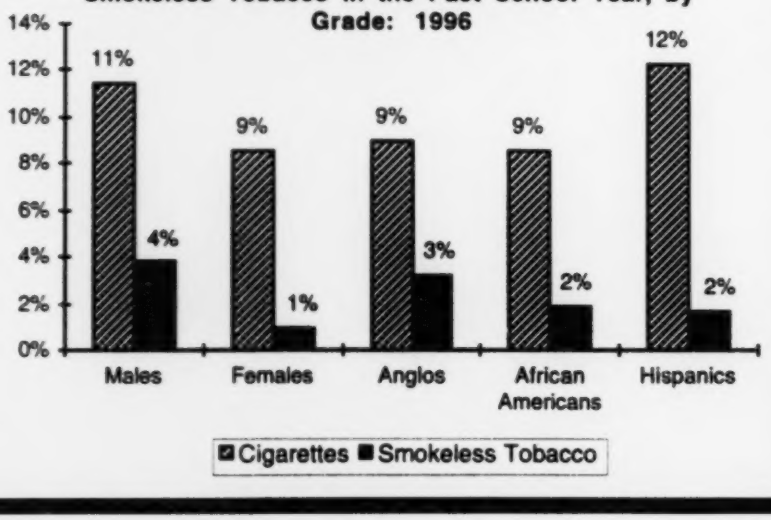
Elementary students who normally earned A's or B's were one-half as likely to report lifetime and past-year tobacco use as those who usually earned C's or below.

Cigarette smoking was the most common form of tobacco consumption among youths. Some 5 percent of fourth graders, 9 percent of fifth graders, and 16 percent of sixth graders smoked cigarettes in the past school year prior to the 1996 survey. Comparable figures for smokeless tobacco were 1 percent, 2 percent, and 3 percent for grades four, five, and six, respectively. As shown in Figure 3, male students were more likely than female students to use cigarettes (11 percent versus 9 percent) and smokeless tobacco (4 percent versus 1 percent) during the past school year. Among the three main racial/ethnic groups, Hispanic youths had the highest past-year prevalence for cigarette smoking at 12 percent (9 percent for both Anglos and African American youths) in 1996. However, Anglo youths reported a slightly higher past-year use of smokeless tobacco (3 percent) than African American and Hispanic youths (2 percent).

Student tobacco use is related to the grades they make in school. Elementary students who normally earned A's or B's were one-half as likely to report lifetime and past-year tobacco use as those who usually earned C's or below. For example, only 15 percent of sixth graders making A's or B's had used tobacco during the past year, compared to 27 percent of those making C's or below. Family structure was related to tobacco use as well. Students who lived with two parents were less likely to use tobacco than those from other families. In the 1996 survey, 14 percent of all elementary students from two-parent households reported lifetime tobacco use, whereas 23 percent of those from other family situations said the same.

Compared to previous surveys, fewer elementary students reported lifetime tobacco use (from 21 percent in 1990 to 19 percent from 1992 to

Figure 3 **Percentage of Texas Elementary Students Who Had Used Cigarettes and Smokeless Tobacco in the Past School Year, by Grade: 1996**



1994, and to 17 percent in 1996). This decrease was also seen for past-year prevalence rates, where 13 percent of all elementary students in 1990 admitted using tobacco within the past school year in comparison to 12 percent in from 1992 to 1994 and 11 percent in 1996. Although the number of Anglo and Hispanic tobacco users declined between 1990 and 1996, tobacco prevalence among African American youths increased over the past four surveys (from 14 percent to 16 percent, lifetime use; from 8 percent to 9 percent, past-year use).

Alcohol

About 15 percent of fourth graders, 19 percent of fifth graders, and 28 percent of sixth graders consumed alcohol during the past school year.

Alcohol continues to be the most widely used substance among Texas elementary students. Twenty-two percent of fourth graders, 29 percent of fifth graders, and 40 percent of sixth graders in 1996 reported that they had drunk alcohol at least once. About 15 percent of fourth graders, 19 percent of fifth graders, and 28 percent of sixth graders consumed alcohol during the past school year (Figure 4). These figures were lower than in 1994, and about 7 to 10 percentage points below the peak levels observed in 1990. Many students begin drinking at an early age. Over one-half of lifetime alcohol users said they started drinking alcohol when they were nine years old or younger.

The popularity of alcohol consumption may be generated by its availability and the perception that alcohol is not as dangerous as other substances. About 33 percent of elementary students in 1996 claimed that they had been offered alcohol, whereas only 9 to 10 percent of those had been offered inhalants and marijuana. When asked where they obtained alcohol, 13 percent of the students said that they got alcohol from home, and 8

Figure 4 **Percentage of Texas Elementary Students Who Had Used Alcohol in the Past School Year, by Grade: 1990, 1992, 1994, and 1996**

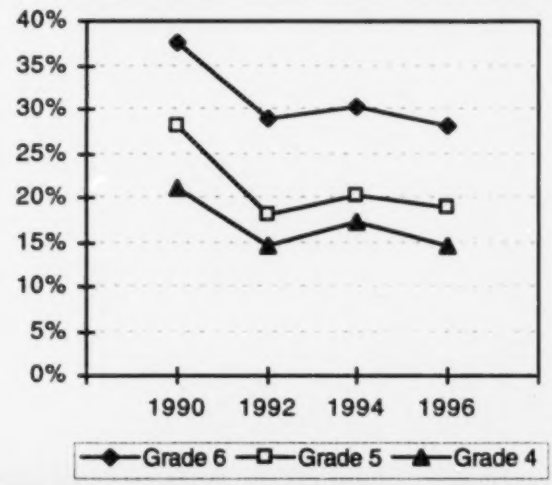
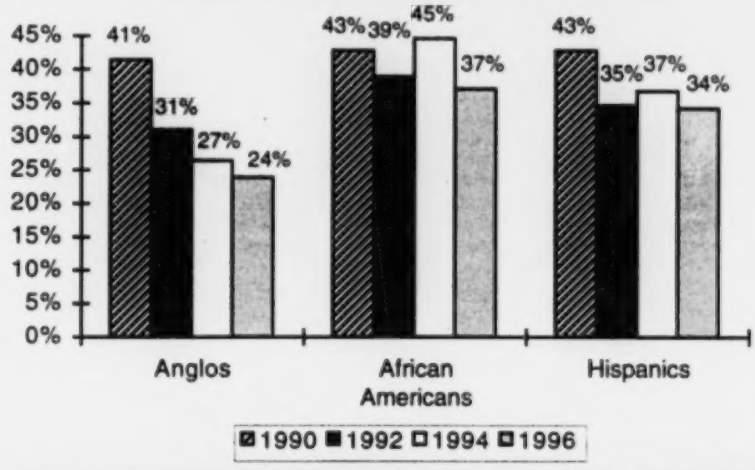


Figure 5 **Percentage of Texas Elementary Students Who Had Ever Used Alcohol, by Ethnicity: 1990, 1992, 1994, and 1996**

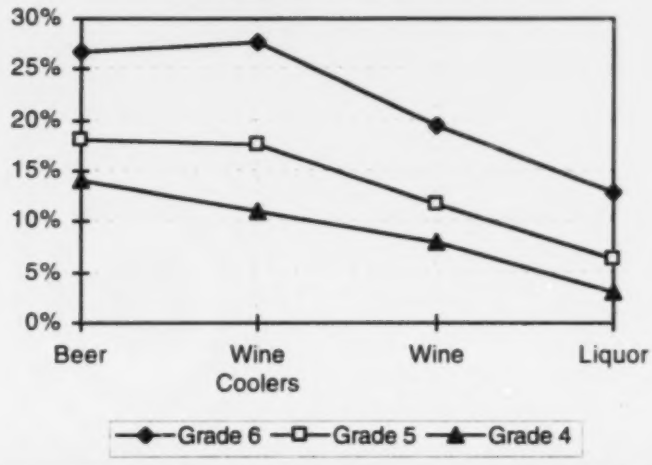


percent got alcohol from friends. Sixty-eight percent of elementary students surveyed in 1996 thought it was very dangerous to use alcohol, compared to 80 percent who believed marijuana was very dangerous to use. In addition, 80 percent of all students in grades four to six said their parents did not approve of kids their age drinking beer, while 85 percent said the same about using marijuana. Parental disapproval of youths' drinking beer decreased slightly as students aged. Only 1 percent of sixth graders in 1996 reported their parent's approval of kids their age consuming beer, down from 4 percent in 1990.

Only 1 percent of sixth graders in 1996 reported their parent's approval of kids their age consuming beer, down from 4 percent in 1990.

Male elementary students were more likely than females to report lifetime use of alcohol in 1996 (35 percent versus 26 percent). These numbers decreased from 48 percent and 36 percent for males and females, respectively in 1990. Racial/ethnic differences in alcohol use among elementary students, however, were slightly different from those of secondary students (Figure 5). In 1990, African American and Hispanic elementary students admitted an equal rate of lifetime alcohol use (43 percent), with Anglos reporting the lowest lifetime rates of alcohol use (41 percent). However, since 1992 African American elementary students have reported more lifetime drinking than Hispanics or Anglos. About 37 percent of African Americans, 34 percent of Hispanics, and 24 percent of Anglos in the 1996 elementary survey said they had drunk alcohol at least once.

Figure 6 **Percentage of Texas Elementary Students Who Had Ever Used Specific Alcoholic Beverages, by Grade: 1996**



Consumption of Specific Beverages

While beer was the most popular alcoholic beverage among fourth and fifth graders, sixth graders preferred wine coolers.

In the 1996 survey, beer was the favorite alcoholic beverage among students in grades four and five, with the overall lifetime use reported at 20 percent. Slightly fewer elementary students (19 percent) had ever drunk wine coolers, the second most frequently consumed alcoholic beverage. Fewer elementary students (13 percent) had ever drunk wine, and even fewer (7 percent) had drunk liquor. For each alcoholic beverage, lifetime use increased with grade level (Figure 6). For example, sixth graders (13 percent) were four times more likely than fourth graders (3 percent) to have consumed liquor at least once. While beer was the most popular alcoholic beverage consumed by fourth and fifth graders, wine coolers were the favorite among sixth graders. Sixth graders preferred wine coolers (28 percent) to beer (27 percent), wine (19 percent), and liquor (13 percent). All of these figures were smaller than in 1994. The largest disparity between 1994 and 1996 was in beer consumption, where 30 percent of sixth graders in 1994 had drunk beer in comparison to 27 percent in 1996.

On average, sixth graders were 9.5 years old when they first tried alcohol, the earliest age of first use than for any other substance. Among sixth graders who have drunk beer, first use occurred on average at 9.4 years of age. Comparable measures for wine coolers, wine, and liquor were 10.0, 10.1, and 10.3 years of age, respectively.

Frequency of Heavy Alcohol Consumption

Elementary students were asked how many times during the past twelve months they had two or more drinks in a row, a considerable amount of alcohol for a person 12 years old or younger. Of the four alcoholic beverages, wine coolers were the most likely to be consumed in large quantities (Table

2). About 16 percent of all elementary students (11 percent, 15 percent, and 23 percent for fourth, fifth, and sixth graders, respectively) had drunk two or more wine coolers in a row at least once during the 1996 school year, and 4 percent claimed doing so three or more times. The percentage of heavy wine coolers drinking on three or more occasions also increased with grade level. Approximately 2 percent of fourth graders versus 6 percent of sixth graders reported drinking wine coolers on three or more occasions.

About 16 percent of elementary students had drunk two or more wine coolers in a row at least once during the 1996 school year.

Only slightly fewer elementary students admitted heavy consumption of beer during the past school year. Some 12 percent of fourth graders, 15 percent of fifth graders, and 20 percent of sixth graders had drunk two or more beers in a row in the past school year. Grade-specific results showed that beer was consumed in large quantities almost as often as wine coolers. On the other hand, a much smaller percentage of elementary students reported heavy consumption of wine or liquor. Seven percent of fourth graders, 10 percent of fifth graders, and 16 percent of sixth graders had drunk two or more glasses of wine in the past year. Comparable measures for liquor were 3 percent, 6 percent, and 11 percent for fourth, fifth, and sixth graders, respectively. Among sixth graders, only 3 percent drank wine or liquor heavily on three or more occasions.

Table 2 **Frequency of Heavy Alcohol Consumption Among Texas Elementary Students, by Grade: 1996**

During the past year, how many times have you had two or more drinks in a row?

	Ever	1 Time	2 Times	3+ Times	Never
Beer					
All Students	15.9%	8.9%	3.5%	3.6%	84.1%
Grade 4	12.4%	7.5%	2.6%	2.3%	87.6%
Grade 5	14.6%	8.5%	3.1%	3.0%	85.4%
Grade 6	20.3%	10.4%	4.6%	5.3%	79.7%
Wine Coolers					
All Students	16.4%	8.3%	4.1%	4.0%	83.6%
Grade 4	10.6%	6.2%	2.3%	2.2%	89.4%
Grade 5	15.1%	8.1%	3.6%	3.3%	84.9%
Grade 6	22.5%	10.3%	6.0%	6.3%	77.5%
Wine					
All Students	11.1%	6.6%	2.4%	2.1%	88.9%
Grade 4	7.0%	4.4%	1.5%	1.1%	93.0%
Grade 5	9.9%	6.1%	2.0%	1.8%	90.1%
Grade 6	15.7%	8.9%	3.5%	3.2%	84.3%
Liquor					
All Students	6.8%	3.5%	1.4%	1.9%	93.2%
Grade 4	3.0%	1.7%	0.6%	0.7%	97.0%
Grade 5	5.7%	3.2%	1.1%	1.4%	94.3%
Grade 6	11.0%	5.3%	2.4%	3.3%	89.0%

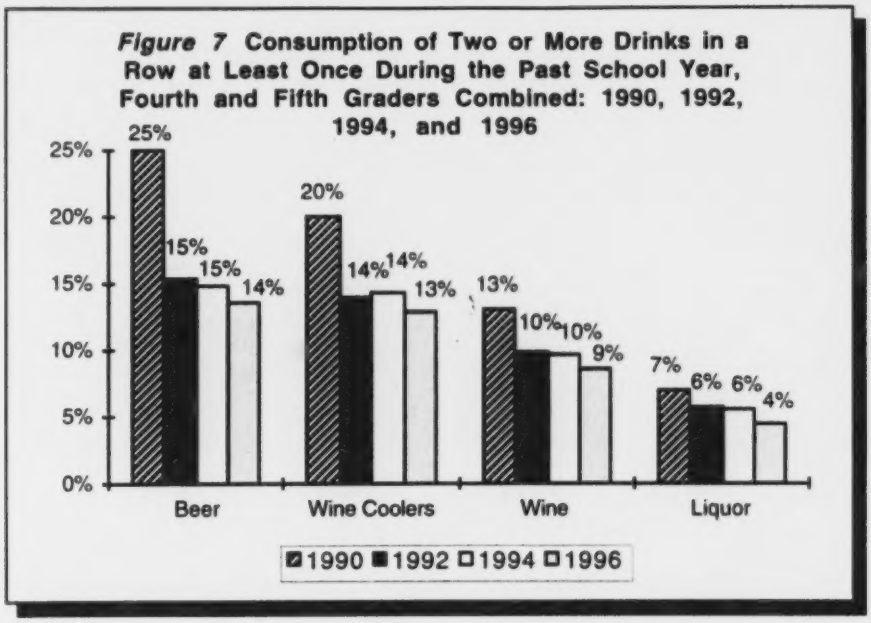


Figure 7 **Consumption of Two or More Drinks in a Row at Least Once During the Past School Year, Fourth and Fifth Graders Combined: 1990, 1992, 1994, and 1996**

Compared to 1990, significantly fewer fourth and fifth graders[1] admitted heavy consumption of alcoholic beverages at least once during the past year (Figure 7). The percentage of fourth and fifth graders who consumed two or more beers in a row during the past year decreased from 25 percent in 1990 to 14 percent in 1996. Similar patterns held for the heavy use of wine coolers (from 20 percent to 13 percent), wine (from 13 percent to 9 percent), and liquor (from 7 percent to 4 percent).

Inhalants

Inhalants are the third most prevalent substances among younger students.

The term "inhalants" refers to hundreds of different household and commercial products which can be abused by sniffing or "huffing" (inhaling through the mouth). Abused inhalants include volatile solvents (such as gasoline, glue, paint thinner, and polishes), anesthetics (such as ether, chloroform, and nitrous oxide), nitrites (such as "Poppers," "Rush," and "Locker Room"), and aerosols (such as spray paint, hair spray, and deodorant). Inhalants are readily available; their easy access and low cost make them an alluring alternative for young people experimenting with substances. Inhalants are the third most prevalent substances after alcohol and tobacco among younger students.

The measurement of the incidence and prevalence of inhalant use is challenging because of the large number of products that can be used as inhalants, the terminology, and the age of the respondents. Many elementary students who sniff or huff substances to get high do not think of that behavior as inhalant use. The Texas School Survey used an array of specific and generic questions to estimate the prevalence and recency of inhalant use. The questionnaire first asked about the use of specific inhalants (glue, gasoline,

spray paint, etc.) to introduce and explain the concept of inhalant use. This explanation came before any of the questions using the generic term "inhalant." Even so, a significant proportion of elementary students who admitted sniffing glue, gasoline, or some other chemical to get high did not appear to fully grasp the concept of inhalant abuse as evidenced by their negative responses to the questions about using "inhalants." Apparently, there is a communication problem to overcome before the issue can even be discussed with children of this age. Because of the constraints of using survey research methods (e.g. the physical length of the survey instrument), it has been suggested that ethnographic research or focus groups may be potential research strategies for acquiring information about the patterns of adolescent inhalant use.[2]

In 1996, some 9 percent of fourth graders, 8 percent of fifth graders, and 12 percent of sixth graders reported lifetime use of inhalants.

About 9 percent of fourth graders, 8 percent of fifth graders, and 12 percent of sixth graders in the 1996 survey reported they had ever used inhalants in their lives. Past-year inhalant use was 6 percent for fourth and fifth graders and 9 percent for sixth graders. These numbers were similar to those in 1994 but much lower compared to 1990 and 1992, when 24 percent of sixth graders, for example, reported lifetime use of inhalants. Again, the decreases may partially be due to the change in the wording to the responses regarding specific types of inhalants since the 1994 survey.

Gender patterns of use showed that 11 percent of male elementary students in 1996 admitted lifetime use of inhalants, compared to 8 percent of females (8 percent versus 6 percent, past-year use). On the basis of race/ethnicity, Hispanic elementary students (12 percent) reported a higher prevalence of lifetime inhalant use than Anglo or African American youths (8 percent). Inhalant use was correlated with poor academic performance in school. Elementary students who normally made grades of C or below were about two times more likely to have used inhalants in their lives than those who received A's and B's (15 percent versus 9 percent). This pattern was also true for past-year prevalence rates (11 percent versus 6 percent).

Specific Inhalants

Correction fluid had been the most commonly used inhalant among elementary students in 1996 (4 percent), followed by glue or spray paint (3 percent) (Appendix C, Table C1). Gasoline or paint thinner (2 percent) had been used by fewer students. In addition, 5 percent of elementary students reported using other inhalants. These measures were about the same as in 1994, but much lower than those observed in the 1990 and 1992 surveys (Table 3). For example, between 1990 and 1992, lifetime glue use was reported at 9 percent by all elementary students and lifetime use of correction fluid or gasoline at 6 to 7 percent. Again, the decreased rates may have resulted from the addition "to get high" to the responses listed in the specific inhalant question since 1994.

While correction fluid was the most popular inhalant among sixth graders, glue was the favorite of fourth and fifth graders.

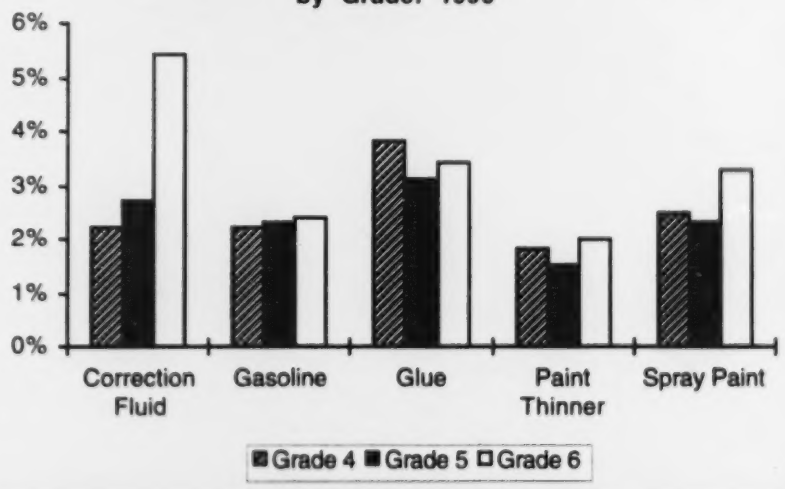
Lifetime prevalence of specific inhalants in 1996 remained low for all grades, with the largest rate at 5 percent among sixth graders using correction fluid (Figure 8). The prevalence rates increased with grade level for correction fluid and gasoline. Yet, fourth graders admitted higher lifetime use of glue, paint thinner, and spray paint than fifth graders, although the prevalence increased more between fifth and sixth grades. While correction fluid was the most popular inhalant among sixth graders, glue was the favorite of fourth and fifth graders. Lifetime glue use was even more prevalent among fourth graders than sixth graders. As noted earlier, these results may reflect the inability of fourth graders to fully comprehend the questionnaire.

Male students in grades four to six reported about two times the lifetime prevalence of females for gasoline, paint thinner, and spray paint. Correction fluid use, however, was about the same between male and female youths. For each specific inhalant, Hispanic elementary students reported a higher

Table 3 **Percentage of Texas Elementary Students Who Had Ever Used Specific Inhalants: 1990, 1992, 1994, and 1996**

	1990	1992	1994	1996
Correction Fluid	6%	6%	4%	4%
Gasoline	6%	7%	2%	2%
Glue	9%	9%	4%	3%
Paint Thinner	3%	4%	2%	2%
Other Inhalants	4%	5%	5%	5%

Figure 8 **Percentage of Texas Elementary Students Who Had Ever Used Specific Inhalants, by Grade: 1996**



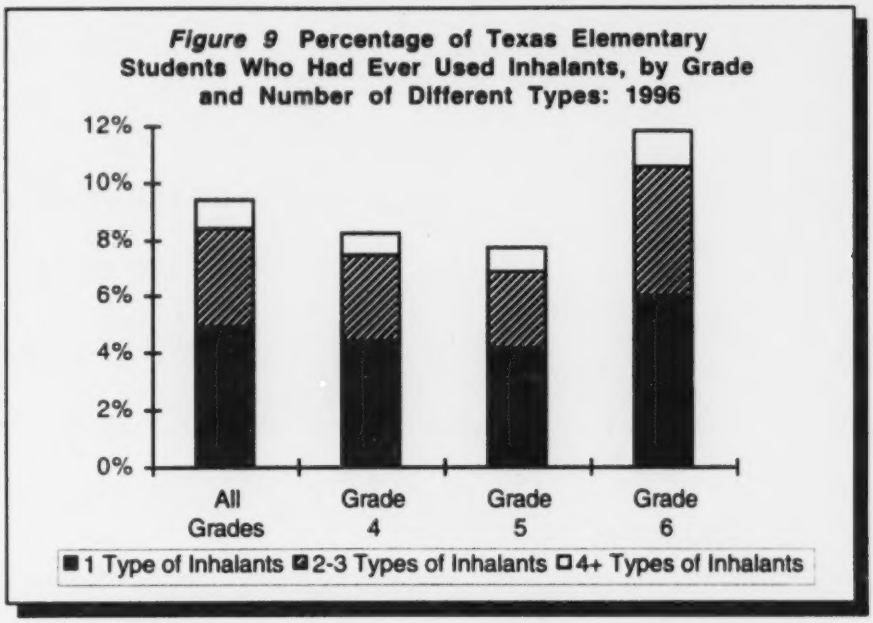


Figure 9 **Percentage of Texas Elementary Students Who Had Ever Used Inhalants, by Grade and Number of Different Types: 1996**

lifetime prevalence than Anglo and African American students. Correction fluid was the most popular inhalant among Hispanic youths, with the highest lifetime rate in grade six at 7 percent. In comparison, Anglo and African American elementary students were the most likely to use glue.

Use of Multiple Inhalants

In the 1996 elementary survey, about 47 percent of lifetime inhalant users admitted using at least two different kinds of inhalants. Of all the elementary students surveyed, 5 percent had ever used one type of inhalant, 3 percent had ever used two or three different inhalants, and 1 percent said they had ever used four or more types of inhalants (Figure 9). Sixth graders used more types of inhalants than fourth or fifth graders. Some 6 percent of sixth graders had ever used two or more kinds of inhalants, whereas only 4 percent of fourth or fifth graders had done the same. Compared to 1994, elementary students who had used inhalants were more likely to use multiple types of inhalants in 1996.

Marijuana

Marijuana was the only illicit substance included in the elementary version of the Texas School Survey. Because of the relative difficulty of elementary students to obtain marijuana, it is not surprising that marijuana prevalence was much lower in the elementary grades as compared to the secondary grades. Only 4 percent of elementary students in 1996 had ever tried marijuana compared to 31 percent of secondary students. As shown in Figure 10, lifetime prevalence in sixth grade (7 percent) was substantially higher than that in fourth grade (2 percent) and in fifth grade (3 percent). About 3 percent of all elementary students in 1996 reported using marijuana

Figure 10 **Lifetime and Past-Year Use of Marijuana Among Texas Elementary Students, by Grade: 1996**

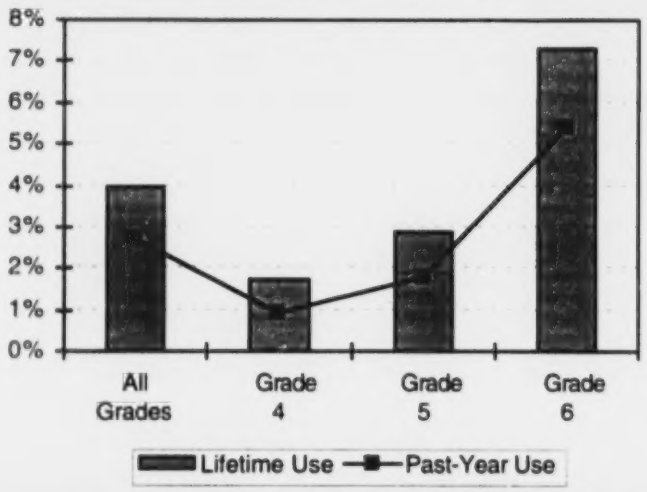
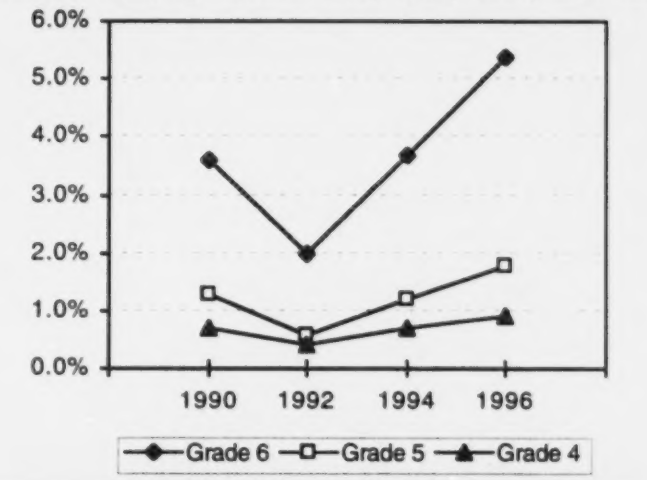


Figure 11 **Percentage of Texas Elementary Students Who Had Used Marijuana in the Past School Year, by Grade: 1990, 1992, 1994, and 1996**



Among the three ethnic groups, Hispanic youths in 1996 had the highest rates of lifetime marijuana use at 6 percent.

during the past school year, and most of this more recent use was among the sixth graders. Five percent of sixth graders used marijuana since school began in the fall, compared to 1 to 2 percent of fourth and fifth graders. Elementary youths began using marijuana later than other substances. By 1996, the average age of first use of marijuana among sixth graders was 10.6 years of age, which was the oldest age reported for any of the substances examined.

Male students in grades four to six were more likely than females to report lifetime (5 percent versus 3 percent) and past-year (4 percent versus 2 percent) use of marijuana. Among the three major ethnic groups, Hispanic

youths in 1996 had the highest rates of lifetime marijuana use at 6 percent, followed by African Americans (4 percent) and Anglos (3 percent). The ethnic patterns of use held for each grade and for past-year prevalence. Hispanic sixth graders reported as high as 11 percent in lifetime use and 8 percent in past-year use of marijuana. Elementary students who normally made C's or below admitted three times as much lifetime marijuana use than those who received A's and B's (8 percent versus 3 percent). This pattern was also true for past-year prevalence rates (6 percent versus 2 percent).

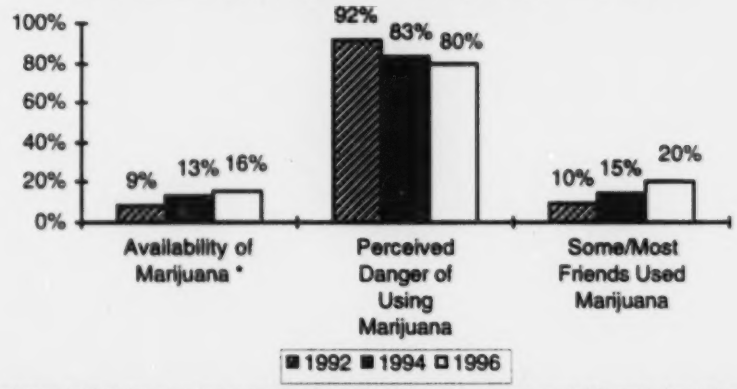
Grade-level patterns showed that sixth graders had a large increase in past-year marijuana use from 2 percent in 1992 to 5 percent in 1996.

Lifetime marijuana use among elementary students decreased from 6 percent in 1994 to 4 percent in 1996, but remained twice as high as the rates observed four years ago. On the other hand, past-year use of marijuana among elementary students increased again in 1996 to 3 percent, continuing a trend that began in 1992 (1 percent). Grade-level patterns showed that sixth graders had a large increase in past-year marijuana use from 2 percent in 1992 to 5 percent in 1996 (Figure 11). The increase of past-month prevalence since 1992 also occurred among fourth and fifth graders.

Availability, Attitudes, and Peer Use of Marijuana

The significant increase in marijuana use among sixth graders seen from 1992 to 1996 might have resulted from the increased availability of marijuana, the reduction in students' perceived danger of using marijuana, and the rise of their friends' marijuana use. In 1992, sixth graders were asked, "If you wanted some, how easy would it be to get [substance]?" About 9 percent of sixth graders said it was very or somewhat easy to obtain marijuana (Figure 12). However, sixth grade students in 1994 and 1996 were asked if they had been offered marijuana, and 13 percent in 1994 and 16 percent in 1996

Figure 12 **Percentage of Texas Sixth Graders Who Said Marijuana Was Very/Somewhat Easy to Get, Very Dangerous to Use, and Some/Most of Their Friends Used Marijuana: 1992, 1994, and 1996**



* In 1994 and 1996, the question regarding the availability for marijuana read differently for sixth graders than it did in the 1992 survey because in 1992 sixth graders were surveyed with the secondary survey instrument.

claimed they had been offered marijuana. Students also thought that marijuana was less dangerous to use over the past three surveys. Ninety-two percent of sixth graders in 1992 believed marijuana was very dangerous to use, whereas 80 percent felt the same in 1996. In addition, the percentage of sixth graders who said some/most of their close friends used marijuana increased sharply from 10 percent in 1992 to 20 percent in 1996.[3]

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[1] Heavy consumption of alcoholic beverages among sixth graders in 1994 and 1996 was not comparable to those in 1990 and 1992. Since sixth graders responded to the secondary survey instrument in both 1990 and 1992, the question about heavy drinking read differently, "During the past year, how often have you had 5 or more drinks at one time?"

[2] E.V. Fredlund, "Epidemiology of Volatile Substance Abuse: The Texas Experience," *Inhalant Abuse: A Volatile Research Agenda*, eds. C. Sharp, F. Beauvais, and R. Spence (Rockville, Md.: National Institute on Drug Abuse Research Monograph Series no. 129, 1992); D. L. Morgan, *Focus Groups as Qualitative Research* (Newbury Park, Calif.: Sage University Paper Series on Qualitative Research Methods, Vol. 16, 1988).

[3] For sixth graders, different survey instruments were used in 1992 (the secondary version) and in 1994 and 1996 (the elementary version). Response categories regarding the number of close friends who use drugs differed slightly between these two versions. The secondary survey offered a five-point response scale (none, a few, some, most, or all) while the elementary survey offered a simplified three-point scale (none, some, or most). In order to be comparable to the 1994 and 1996 results, the 1992 responses of "a few" and "some" were combined as "some," and "most" and "all" were combined as "most" among sixth graders.

Chapter 4: Demographic Variables and Substance Use

Introduction

Subgroup differences in substance use among fourth through six graders generally reflected those of secondary students. Demographic characteristics including gender, race/ethnicity, academic performance, family structure, socioeconomic status, and grade level are all associated with substance use by elementary students.

A large increase in substance use was seen between fifth and sixth grades, indicating that many students began experimenting with substances for the first time in the sixth grade.

The results of the 1996 survey showed that male elementary students were more likely than female students to use all types of substances. African American students in grades 4 through 6 had the highest rates of lifetime use of alcohol, while Hispanic elementary students reported the highest levels of lifetime use for tobacco, inhalants, and marijuana. Elementary students who earned grades of C or below reported two to three times as much prevalence use of all substances than those who earned A's and B's. Additionally, students who lived with both of their parents were less likely to use substances than those who lived in other family structures.

Elementary students with a college-educated parent were less likely to use substances than those whose parents did not graduate from college. The eligibility of a student for a free or reduced-price school lunch, a proxy of living in a low-income family, is also significantly related to substance use. Elementary students from low-income families reported higher prevalence use of any substance than those from other families. Finally, the grade level of a student continues to be a crucial factor in differing prevalence rates of substance use. A large increase in substance use was seen between fifth and sixth grades, indicating that many students began experimenting with substances for the first time in the sixth grade. No other grade progression showed such a noticeable increase in substance use.

Gender

As with secondary students, male students in grades four to six were more likely to use substances than female students (Appendix B, Tables B3 and B4). About 21 percent of male elementary students in 1996 said they had ever used tobacco in their lives, compared to 13 percent of females. Thirty-five percent of male elementary students had ever drunk alcohol in contrast to 26 percent of females. More males admitted lifetime use of inhalants (11 percent) and marijuana (5 percent) than females (8 percent and 3 percent, respectively). These patterns were true for all grades.

Males also reported a higher prevalence of past school year use than females on all types of substances. Table 4 compares past-year use of all substances between male and female elementary students, and presents a ratio

Table 4 **Percentage of Texas Elementary Students Who Had Used Substance in the Past School Year, by Gender and Grade: 1996**

	Males	Females	Ratio*
Tobacco			
All Students	13.0%	8.6%	1.52
Grade 4	7.2%	3.8%	1.89
Grade 5	12.5%	7.4%	1.69
Grade 6	19.5%	14.6%	1.34
Alcohol			
All Students	23.0%	17.9%	1.28
Grade 4	17.9%	11.1%	1.61
Grade 5	21.5%	16.4%	1.31
Grade 6	29.8%	26.4%	1.13
Inhalants			
All Students	7.9%	6.2%	1.27
Grade 4	7.5%	5.0%	1.50
Grade 5	7.2%	5.2%	1.38
Grade 6	9.1%	8.5%	1.07
Marijuana			
All Students	3.5%	1.9%	1.88
Grade 4	1.4%	0.5%	2.80
Grade 5	2.3%	1.2%	1.92
Grade 6	7.0%	4.0%	1.75

* Ratio = (% Males) / (% Females)

which is computed by dividing male prevalence of use by the female prevalence of use. Interpretation of this measure is straightforward; males are [ratio] times more likely than females to use [type of substance]. For example, male students were about two times more likely than females to use marijuana in the past school year (4 percent versus 2 percent). Grade-level ratios in past-year use narrowed from fourth through sixth grade for all substances. Male fourth graders were 1.9 times more likely than female fourth graders to try tobacco in the past school year (7 percent versus 4 percent). By the sixth grade, males were only 1.3 times more likely than females to report past-year tobacco use (20 percent versus 15 percent). This finding reveals that as students get older, females increase their substance use at a faster rate than males.

As students get older, girls increase their substance use at a faster rate than boys.

Although prevalence rates of substance use among elementary students are fairly low, it should be noted that these low percentages translate into large numbers of students. For example, by translating the rates of use into actual numbers, it is estimated that about 103,300 male elementary students and 76,100 female elementary students consumed alcohol in some form within the past school year. The actual number of users was measured by multiplying the prevalence estimate derived from the school survey by the

total four to six grade student enrollment in Texas[1], which was 449,342 for male students and 425,185 for female students in the 1995-1996 school year.

Past-year marijuana use in 1996 was as much as two times more than that in 1994 among female students.

A comparison of 1996 prevalence rates to those of 1990 showed that both male and female elementary students showed a decrease in the use of all substances except for marijuana. Between 1994 and 1996, male elementary students reported lower prevalence rates for tobacco and alcohol, while rates among females remained level. This decrease in the male rates of tobacco and alcohol use reduced the gender differences in tobacco and alcohol use found in the 1996 survey. However, past-year use of inhalants and marijuana increased over the past two surveys for both groups, with females showing a greater increase than males. Past-year marijuana use in 1996 was as much as two times more than that in 1994 among female elementary students (2 percent versus 1 percent).

Race/ Ethnicity

Of the three major ethnic groups, Hispanic elementary students in 1996 reported the highest rates of lifetime use for tobacco, inhalants, and marijuana, while African American students ranked highest in lifetime use of alcohol (Appendix B, Tables B5 to B7). Nineteen percent of Hispanic students had ever used tobacco, compared to 16 percent of Anglos or African Americans. Prevalence rates of lifetime alcohol use were higher among African American students at 37 percent than for Hispanics at 34 percent or Anglos at 24 percent. About 6 percent of Hispanics, 4 percent of African Americans, and 3 percent of Anglos had ever used marijuana in their lives. These ethnic patterns of use were consistent for each grade.

Similar to lifetime prevalence, Hispanic elementary students admitted

Figure 13 **Percentage of Texas Elementary Students Who Had Used Substances in the Past School Year, by Race/Ethnicity: 1996**

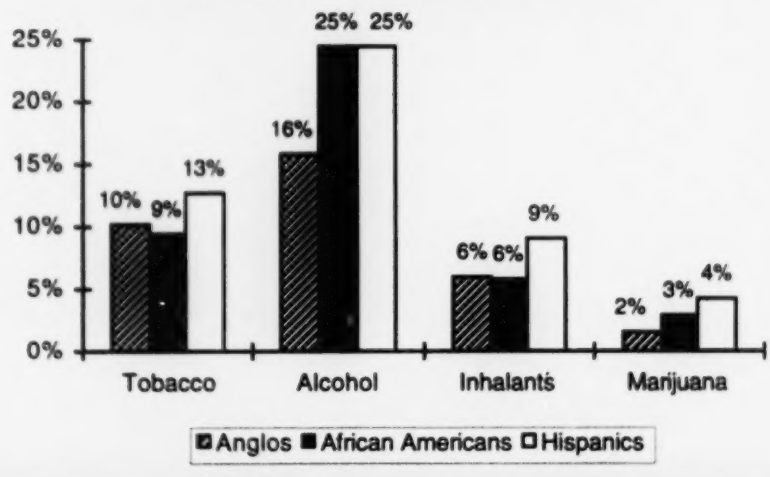


Figure 14 **Percentage of Texas Elementary Students Who Had Used Alcohol in the Past School Year, by Race/Ethnicity and Grade: 1996**

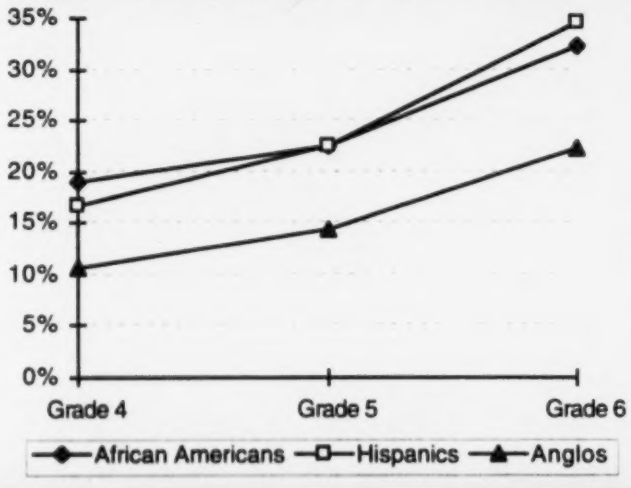


Table 5 **Percentage of Texas Elementary Students Who Had Ever Used Substances, by Race/Ethnicity: 1994 and 1996**

	Anglo Students			African American Students		
	1994	1996	Change	1994	1996	Change
Tobacco	18.2%	16.1%	-11.7%	17.2%	16.4%	-4.5%
Alcohol	26.6%	24.0%	-9.8%	44.8%	37.2%	-17.0%
Inhalants	7.9%	8.1%	2.1%	8.9%	8.0%	-10.5%
Marijuana	4.8%	2.5%	-48.3%	7.2%	4.1%	-43.3%

	Hispanic Students		
	1994	1996	Change
Tobacco	21.0%	19.0%	-9.4%
Alcohol	36.8%	34.4%	-6.6%
Inhalants	12.7%	12.3%	-3.2%
Marijuana	6.0%	5.7%	-5.1%

past-year use at higher rates than Anglos or African Americans for most substances except alcohol (Figure 13). For example, 13 percent of Hispanics had used tobacco since school began, whereas 10 percent of Anglos and 9 percent of African Americans had done the same. Prevalence rates for past-year alcohol use, however, were about equal for African American and Hispanic elementary students at 25 percent, followed by Anglos at 16 percent. Some notable ethnic differences were observed in past-year alcohol use (Figure 14). In the fourth grade, African American students (19 percent) admitted a higher past-year alcohol prevalence than Hispanics (17 percent)

and Anglos (11 percent). Yet in the sixth grade, more Hispanics (35 percent) than African Americans (32 percent) or Anglos (22 percent) had consumed alcohol in the past school year.

While rates of alcohol use were higher for African Americans, the estimated number of Hispanic and Anglo students using alcohol was much larger than the number of African American students. It is estimated that about 77,300 Hispanic elementary students, 65,200 Anglo elementary students, and 30,100 African American elementary students drank alcohol since school began. The number of annual drinkers was measured by multiplying the past-year alcohol prevalence derived from the school survey by the total grades four to six student enrollment in Texas for each ethnic group, which totaled 414,851 for Anglos, 122,685 for African Americans, and 315,485 for Hispanics in the 1995-1996 school year. Similarly, the number of lifetime drinkers can be measured by applying the lifetime alcohol prevalence. About 108,500 Hispanic elementary students, 99,700 Anglos, and 45,700 African Americans were estimated as lifetime alcohol users.

The past-year trend was up for inhalants and marijuana among all three ethnic groups between 1994 and 1996, with the greatest increase seen among Anglos.

Between 1994 and 1996, lifetime prevalence decreased in all three ethnic groups for all substances (Table 5). The only exception was inhalant use among Anglo students, whose lifetime prevalence remained level at 8 percent over the past two surveys. African American students showed the greatest decrease of any ethnic group in lifetime alcohol use from 1994 (45 percent) to 1996 (37 percent). Yet, lifetime use of tobacco and marijuana decreased the most among Anglo students. In 1994, African American students had the highest rate of lifetime marijuana use, but in 1996, Hispanic students reported more lifetime marijuana use than any other ethic group. Actually, Hispanic sixth graders were the only group whose lifetime prevalence of marijuana use increased from 1994 (10 percent) to 1996 (11 percent). The past-year trend, on the other hand, was up for inhalants and marijuana among all three ethnic groups between 1994 and 1996, with the greatest increase seen among Anglo students.

Grades Earned in School

As in the secondary population, fourth through sixth graders who usually made C's, D's, or F's were more likely to use substances than those who made A's and B's (Appendix B, Tables B8 and B9). In the 1996 elementary survey, students who earned grades of C or below reported two or three times as much use as their peers who earned A's or B's for all substances (Table 6). For example, about 25 percent of C, D, and F students had ever used tobacco at least once, while 15 percent of A and B students had done so. Past-year marijuana use was 6 percent among students making C's or lower, compared to only 2 percent of those receiving A's or B's.

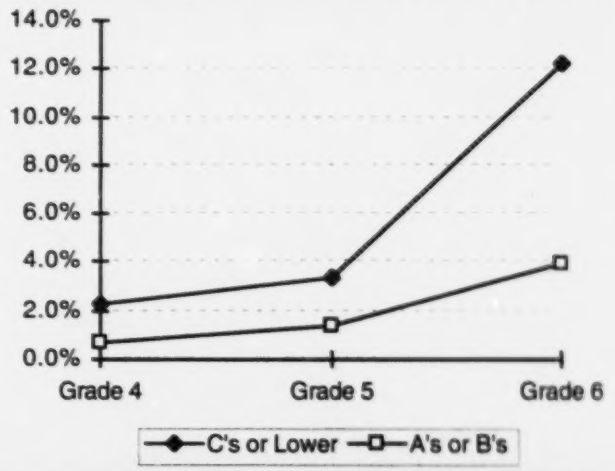
Academic status differences in prevalence use of substances grew from fourth through sixth grade. As shown in Figure 15, among fourth graders, 2

Table 6 **Percentage of Texas Elementary Students Who Had Used Substances, by Usual Grades Received in School: 1996**

	Ever Used			Used This School Year		
	A's or B's	C's or Lower	Ratio*	A's or B's	C's or Lower	Ratio*
Tobacco	15.3%	25.2%	1.6	9.4%	17.2%	1.8
Alcohol	27.9%	40.5%	1.5	18.6%	29.3%	1.6
Inhalants	8.6%	15.1%	1.8	6.3%	10.9%	1.7
Marijuana	3.1%	7.9%	2.5	2.0%	5.9%	3.0

*Ratio = (% C, D, or F Students) / (% A or B Students)

Figure 15 **Percentage of Texas Elementary Students Who Had Used Marijuana in the Past School Year, by Academic Status and Grade: 1996**



Past-year use of inhalants and marijuana increased between 1994 and 1996 for both academic groups.

percent of C, D, and F students smoked marijuana during the past school year in comparison to 1 percent of A and B students. By the sixth grade, the past-year rates of marijuana use were 12 percent and 4 percent for students with lower grades and higher grades, respectively.

Compared to 1994, both academic groups of students in 1996 reported declines in past-year use of tobacco and alcohol. Yet, the past-year rates decreased less among students making A's and B's than those making C's or below. As a result, academic status differences in tobacco or alcohol use were smaller in 1996 than in 1994. For example, past-year use of alcohol decreased slightly from 20 percent in 1994 to 19 percent in 1996 among A and B students, while the rates ranged from 34 percent to 29 percent among C, D, and F students. On the other hand, past-year use of inhalants and marijuana increased over the past two surveys for both groups, with A and B students

showing a greater increase than their counterparts. This phenomenon also reduced the academic-related differences in 1996 inhalant or marijuana use.

Family Structure

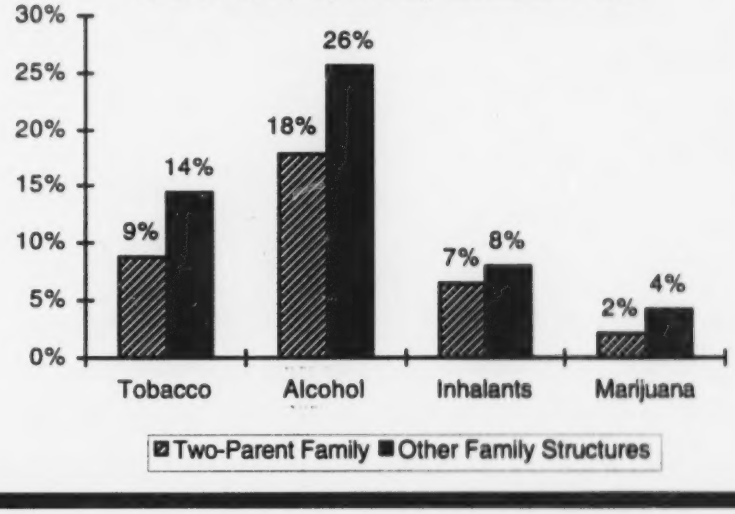
Among fifth graders, students who did not live with two parents were about three times more likely than their counterparts to admit past-year use of marijuana.

Elementary students who lived with two parents were less likely to use substances than those who lived in other family structures (Appendix B, Tables B10 and B11). In the 1996 elementary survey, 14 percent of students from two-parent homes had used tobacco, 27 percent had drunk alcohol, and 3 percent had smoked marijuana at least once. Students from other family situations, by contrast, reported lifetime prevalence rates of 23 percent for tobacco, 37 percent for alcohol, and 6 percent for marijuana. This pattern was consistent for past-year substance use as well (Figure 16). The most notable family status differences were observed in marijuana use. Among fifth graders, for example, students who did not live with two parents were about three times more likely than those living in two-parent households to admit past-year use of marijuana (3 percent versus 1 percent).

As expected, family structure is one of the strongest predictors of how early students begin using substances. Children living in two-parent homes showed a consistent propensity to wait longer before first trying substances than their counterparts from other family situations. For example, 11 percent of elementary students living with two parents said they first used alcohol by eight years of age, compared to 15 percent of those from other family environments in 1996.

Family status differences in alcohol use lessened from 1994 to 1996. A larger decreased rate in alcohol use was reported by students not living with two parents over the years. This phenomenon is more obvious among

Figure 16 **Percentage of Texas Elementary Students Who Had Used Substances in the Past School Year, by Family Structure: 1996**



younger students. In the fourth grade, lifetime alcohol use decreased slightly from 20 percent in 1994 to 19 percent in 1996 for students from two-parent families, but the rate decreased from 36 percent to 27 percent for students from other family structures.

Socio-economic Status

In 1996, about 23 percent of elementary students with a college-educated parent reported past-year use of any substance, compared to 33 percent of their counterparts.

Substance use is related to the socioeconomic status (SES) of students as well. In the elementary survey, two questions about indirect SES indicators are covered, including parental education status and eligibility for a free or reduced-price school lunch. Youths who had college-educated parents were less likely to use substances than those who did not (Table 7). In the 1996 survey, about 23 percent of elementary students with a parent who had a college degree reported past-year use of any substance, compared to 33 percent of those whose parents did not graduate from college. This pattern holds across all grades, and the most evident difference is among sixth graders (30 percent versus 43 percent).

The question regarding eligibility for a free or reduced-price school lunch is a good measure of family income level. About 42 percent of all respondents in the 1996 elementary survey were from low-income families and qualified for a free or reduced-price school lunch, 36 percent did not qualify, and 21 percent said they did not know. Unlike secondary students, there is a clear relationship between substance use and family income level among students in grades four to six. Table 7 shows that elementary students who lived in low-income families were more likely to use a substance in the past year than those from other families.[2] About 21 percent of fourth graders, 27 percent of fifth graders, and 39 percent of sixth graders who qualified for a

Table 7 **Percentage of Texas Elementary Students Who Had Used a Substance* in the Past School Year, by Socioeconomic Variables and Grade: 1996**

	Parental Education		Family Income Level	
	College Educated	Not College Educated	Free or Reduced Price Lunch	No Free or Reduced Price Lunch
All Students	23.1%	33.0%	29.2%	24.0%
Grade 4	16.8%	22.4%	20.8%	16.1%
Grade 5	22.3%	27.4%	27.4%	21.2%
Grade 6	29.7%	43.0%	38.6%	31.6%

*Tobacco, alcohol, inhalants, and/or marijuana.
**Children in a family of four earning $19,695 a year or less were eligible to receive a free school lunch; children in a family of four earning more than $19,695 but less than $28,028 a year were eligible to receive a reduced-price school lunch. (Source: U.S. Dept. of Agriculture, "The National School Lunch and Child Nutrition Program - Income Guide, 1995-1996.")

free or reduced-price school lunch had used substances during the past year, compared to 16 percent, 21 percent, and 32 percent of fourth, fifth, and sixth graders, respectively, who did not qualify.

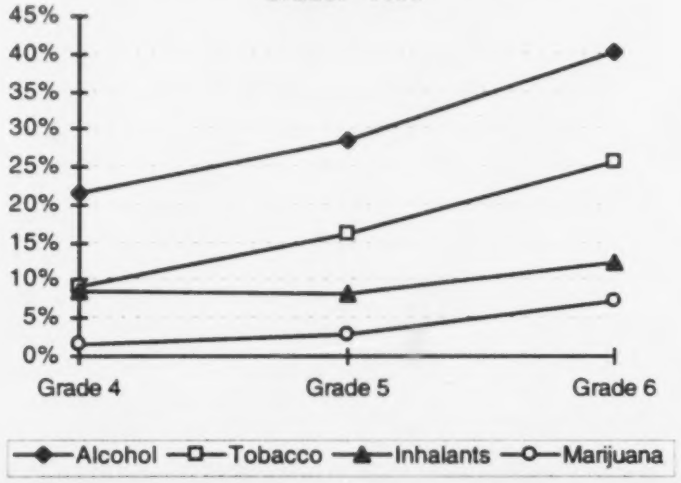
Length of Residence in Town

Elementary students were asked whether they had lived in their town for more than three years. There were only small differences in prevalence of substance use between students living in the town more than three years and students in town three or fewer years (Appendix B, Tables B12 and B13). The relationship between the student's length of residence and substance use is complex in the 1996 survey. In the lower grades, the "new" students reported slightly higher lifetime and past-year use of substances than the longer-resident students. For example, about 23 percent of the "new" fourth graders said they had ever used alcohol in their lives, compared to 22 percent of fourth graders who had resided in the town more than three years. This association, however, was reversed for the older students. The "new" sixth graders admitted a slightly lower rate of lifetime alcohol use (39 percent) than did the longer-resident sixth graders (41 percent).

Grade Level

As with secondary students, substance use among elementary students was related to grade level. With the exception of inhalants, which showed the lowest use among fifth grade students, substance use increased by grade level. A noticeable increase in prevalence use was seen between fifth and sixth grades, which indicates that many students begin experimenting with substances for the first time in the sixth grade (Figure 17). One reason for this increase is that in many school districts, sixth graders are integrated into

Figure 17 **Percentage of Texas Elementary Students Who Had Ever Used Substances, by Grade: 1996**



middle school campuses where they are exposed to substance use by older students. Moreover, sixth grade students become increasingly independent as they enter early adolescence, and subsequently are more inclined to experiment with substances than younger students.

In 1996, lifetime tobacco prevalence climbed from 9 to 16 percent between grades four and five, then to 26 percent among sixth graders.

Lifetime prevalence of tobacco and alcohol increased from year to year among elementary students. In the 1996 survey, lifetime tobacco prevalence climbed from 9 percent to 16 percent between grades four and five, then to 26 percent among sixth graders. The percentage who had ever drunk alcohol rose from 22 percent to 29 percent between fourth and fifth grades, then increased to 40 percent among sixth graders. Lifetime inhalant and marijuana use, on the other hand, remained stable in the fourth and fifth grade, then increased sharply in the sixth grade. Lifetime inhalant use was about 9 percent for fourth graders, dropped to 8 percent for fifth graders, but then increased to 12 percent among sixth graders. Lifetime marijuana use was 2 to 3 percent for fourth and fifth graders, then more than doubled to 9 percent among sixth graders. Grade-level patterns were consistent for past-year use.

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[1] Student enrollment data were based on the Public Education Information Management System (PEIMS) provided by the Texas Education Agency.

[2] Recent prevention literature indicates that for many low-income families, parents worry more and more about their eroding economic security and have become increasingly pessimistic about their children's future. These children who receive inadequate care and support are at high risk of being disconnected from school, depressed, and prone to drug use and early criminal activity. See Ann Goetting, "Do Americans Really Like Children?" *The Journal of Primary Prevention*, Vol. 15, No. 1, 1994, pp. 81-92.

Chapter 5: Other Factors Related to Substance Use

Introduction

The survey findings highlight the need to think of substance use among youths as a multi-dimensional problem that cannot be solved without first considering knowledge, values, attitudes, availability, and peer use.

In most cases, children use alcohol and/or tobacco before they try marijuana, and use of marijuana almost invariably precedes the use of other types of illicit drugs. What happens in the elementary grades, thus, sets the stage for adolescent substance use. Therefore, the factors that may reduce or delay the onset of substance use among elementary students are important. In this section, several risk factors which may impact a student's substance use include school problems, close friends who use substances, availability of substances, perceived danger of substance use, parental attitudes toward substance use, and age of first use.

Elementary students were more likely to admit higher levels of substance use if they had missed class or had disciplinary problems in school, if most of their friends also used substances, if they had been offered substances, if they did not think substances were dangerous, and if they reported parental approval of substance use. The increase in marijuana use between 1992 and 1996 also corresponded to the increased availability of marijuana, the softened perceptions of the danger of marijuana use, and the increased number of close friends who used marijuana. In addition, elementary students' early opinions toward substance use can be affected by many school-based sources of information. The most likely source of information from which elementary students learned about drugs or alcohol was their teachers.

These survey findings highlight the need to think of substance use among youths as a multi-dimensional problem that cannot be solved without first considering knowledge, values, attitudes, availability, and peer use. Substance use prevention and intervention efforts must extend their emphasis beyond the individual youth to include parents and schools, helping to develop parental support while encouraging children's attendance in school and disassociation with deviant peers.

School Problems

In the 1996 elementary survey, about 4 percent of all respondents said that they had missed class without a parent's consent, and 30 percent said they had been sent to the principal because of their conduct problems during the past school year. Students who had cut class and/or been sent to the principal were much more likely to have used substances than other students. Among those elementary students who had cut school since school began, 70 percent had drunk alcohol, 23 percent had used inhalants, and 26 percent had used marijuana in their lives. Lifetime prevalence was also high among students who had been sent to the principal since school began. These stu-

dents reported lifetime prevalence rates at 48 percent for alcohol, 11 percent for inhalants, and 9 percent for marijuana. By contrast, elementary students who had neither cut school nor been sent to the principal reported much lower use of these substances — only 21 percent had consumed alcohol, 4 percent had used inhalants, and 2 percent had tried marijuana during their lifetime.

Close Friends Who Use

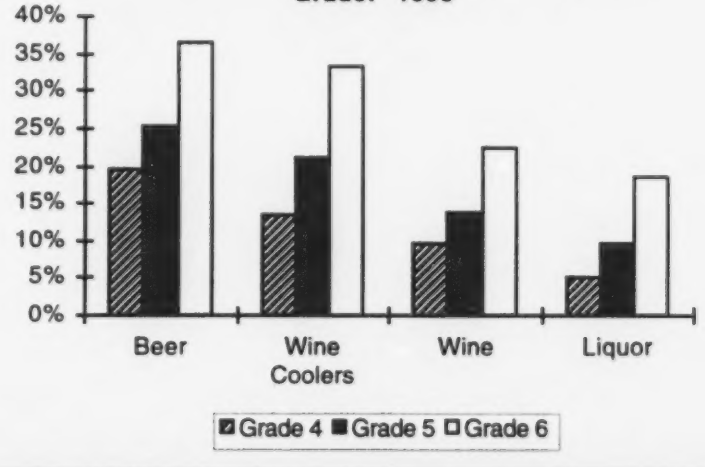
Approximately 35 percent of students in 1996 said that some or most of their close friends drank alcohol.

Peer use is often cited as an important factor associated with a student's substance use. In the elementary survey, students were asked "About how many of your close friends your age use [substances]?" Approximately 35 percent of all elementary students in 1996 said that some or most of their close friends drank alcohol, which was a much higher percentage than for other substances (Appendix C, Table C2). Thirteen percent of the students reported that at least some of their close friends used inhalants, and 12 percent said that at least some of their close friends used marijuana.

Rates of tobacco use among peers increased by grade. About 19 percent of fourth graders, 29 percent of fifth graders, and 43 percent of sixth graders said that their close friends had used tobacco. In each grade, two to three times as many students had close friends who smoked cigarettes than had friends who used smokeless tobacco. Among sixth graders, 41 percent reported at least some of their peers smoked cigarettes, while only 13 percent had friends who used smokeless tobacco.

As with the self-reported use of alcoholic beverages, elementary students in 1996 were most likely to have close friends who drank beer (28 percent), followed by friends who drank wine coolers (23 percent). Fewer students had

Figure 18 **Percentage of Texas Elementary Students Who Said Some/Most of Their Close Friends Used Various Alcoholic Beverages, by Grade: 1996**



close friends who drank wine (16 percent) and fewest had friends who drank liquor (11 percent). This peer pattern was true for each grade level. Grade-level data also indicate that the percentage of alcohol use among peers increased by grade (Figure 18). For example, about 20 percent of fourth graders, 25 percent of fifth graders, and 37 percent of sixth graders said that their close friends had drunk beer.

Grade level data indicate that the percentage of alcohol use among peers increased by grade.

About 7 percent of fourth graders, 11 percent of fifth graders, and 19 percent of sixth graders said that at least some of their close friends used inhalants (Appendix C, Table C2). These figures were low compared to most other substances. Very few elementary students reported having any close friends who used marijuana. Some 5 percent of fourth graders, 10 percent of fifth graders, and 20 percent of sixth graders had close friends who used marijuana.

The extent of peer use gives an indication of the student's opportunity to experiment and indicates the level of peer pressure to use substances. While students may be likely to deny their own substance use behavior, they may be more straightforward about their friends' use. This reason would partly explain why the reported peer use of substances, in general, was much higher than the observed personal use among students. For example, 31 percent of all elementary students in the 1996 survey said that at least some of their friends used tobacco, but many fewer students (17 percent) had ever used tobacco.

Substance Availability

About 33 percent of elementary students in 1996 reported they had been offered alcohol, while only 9 percent had been offered inhalants and 10 percent had been offered marijuana.

Availability is another factor related to substance use among youths. In the elementary survey, students were asked "Has any one ever tried to give you [substances]?" About 33 percent of all elementary students in 1996 reported they had been offered alcohol, while only 9 percent had been offered inhalants and 10 percent had been offered marijuana (Table 8). The percentage of availability increased with grade. For example, 37 percent of sixth graders claimed they had been offered tobacco products, compared to 20 percent of fourth graders and 27 percent of fifth graders. In each grade, two to three times as many as students had been offered cigarettes than smokeless tobacco.

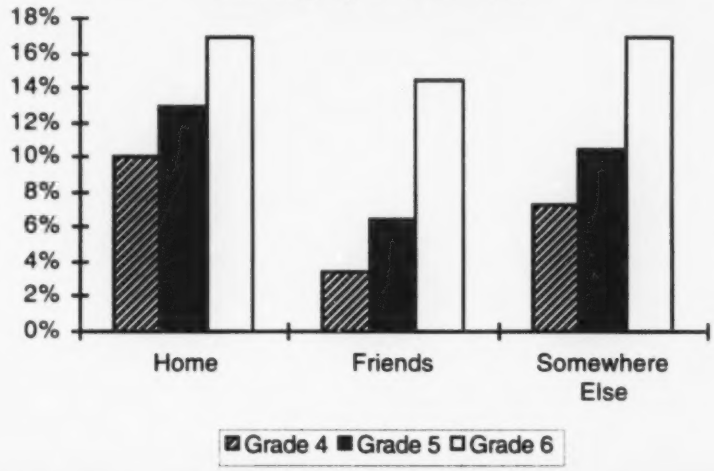
As expected, elementary students were most likely to have been offered beer than any other alcoholic beverage. Nineteen percent of fourth graders, 25 percent of fifth graders, and 33 percent of sixth graders said they had been offered beer, whereas only 5 percent of fourth graders, 8 percent of fifth graders, and 15 percent of sixth graders had been offered liquor. Students had been offered wine coolers and wine at rates between those of beer and liquor.

The availability for inhalants was lower than any other substance in the 1996 elementary survey. What is most interesting about the inhalant response pattern is that fewer elementary students recall being offered inhalants than

Table 8 **Percentage of Texas Elementary Students Who Had Been Offered Substances, by Grade: 1996**

	All	Grade 4	Grade 5	Grade 6
Tobacco	**28%**	**20%**	**27%**	**37%**
Cigarettes	26%	17%	24%	35%
Smokeless Tobacco	10%	7%	9%	13%
Alcohol	**33%**	**24%**	**31%**	**41%**
Beer	26%	19%	25%	33%
Wine Coolers	18%	11%	17%	26%
Wine	14%	8%	12%	20%
Liquor	10%	5%	8%	15%
Inhalants	**9%**	**5%**	**7%**	**13%**
Marijuana	**10%**	**6%**	**9%**	**16%**

Figure 19 **Percentage of Texas Elementary Students Who Had Obtained Alcohol From Various Sources, by Grade: 1996**



admit using them. For example, 9 percent of fourth graders had ever used inhalants, whereas only 5 percent said they had ever been offered something to inhale. For other substances queried in this survey, the relationship between availability and use was the reverse (for example, 8 percent of fourth graders had ever smoked cigarettes while 17 percent had been offered it). There are two potential explanations for this exception. First, many elementary students who sniffed volatile solvents did not understand what the term "inhalants" means. Since they do not understand the concept of inhalants, they cannot correctly answer the question regarding whether or not they have been offered them. The second reason could be that because these inhalant

products are so easily available, kids may not remember being offered them or may have simply acquired the substances for themselves.

About 6 percent of fourth graders, 9 percent of fifth graders, and 16 percent of sixth graders in the 1996 survey reported they had been offered marijuana. These rates were quite low as compared to other substances. Among fourth graders who had been offered marijuana, about 16 percent had gone on to use it. Twenty-one percent of fifth graders and 38 percent of sixth graders who had the opportunity to try marijuana actually did so.

Elementary students were most likely to say that they got the alcohol they drank from home.

Between 1994 and 1996, the percentage of availability reported by elementary students did not change significantly. Yet, fewer students reported availability of substances than in 1990. For example, about 40 percent of fourth graders and 46 percent of fifth graders in 1990 said they had been offered alcohol; these rates decreased to 24 percent and 31 percent in 1996. This probably helped generate the observed declines in the prevalence of alcohol use by elementary students over time.

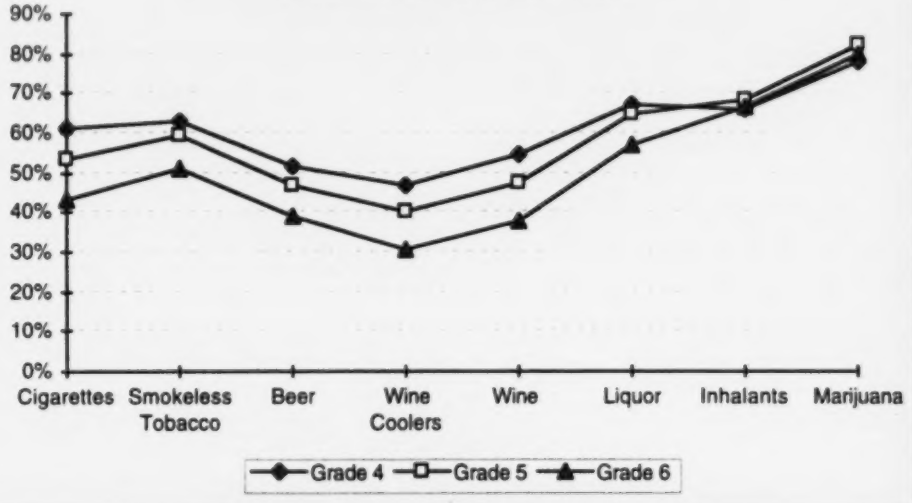
Elementary students were also asked where they got the alcohol they drank (Figure 19). In the 1996 survey, students in the fourth (10 percent), fifth (13 percent), and sixth grade (17 percent) were most likely to say that they obtained alcohol at home. Relatively few said they normally got alcohol from friends, although the percentage increased from 3 percent of fourth graders to 14 percent of sixth graders. A significant proportion of elementary students usually obtained alcohol from sources other than home or their friends. The percentages of students who reported obtaining alcohol from other sources were 7 percent, 11 percent, and 17 percent in the fourth, fifth, and sixth grades, respectively. This finding suggests that while many young children find ways of getting alcoholic beverages in their homes, many look for other sources of alcohol. Compared to 1994, slightly fewer elementary students (about 1 to 2 percentage points lower) reported getting alcohol from various sources.

Perceived Danger

In the elementary survey, students were asked "How dangerous do you think it is for kids your age to use [substance]?" The responses range from "very dangerous" to "not at all dangerous" (Appendix C, Table C3). About 65 percent of all elementary students in 1996 thought that tobacco was very dangerous to use, 68 percent believed that alcohol was very dangerous to use, and 80 percent thought it was very dangerous to use marijuana. These figures were much higher than those reported by their older counterparts in secondary school. However, fewer elementary students believed that inhalants were very dangerous to use as compared to secondary students (67 percent versus 76 percent). Again, this may be partly because many younger students taking the survey did not fully understand what inhalants were.

About 61 percent of fourth graders, 53 percent of fifth graders, and 43

Figure 20 **Percentage of Texas Elementary Students Who Thought it Was Very Dangerous to Use Various Substances, by Grade: 1996**



percent of sixth graders believed that it was very dangerous to smoke cigarettes (Figure 20). These figures were lower than for other substances except some alcoholic beverages, suggesting that elementary students may be less fearful of smoking cigarettes than using most of the other substances queried. Using smokeless tobacco was perceived more often as very dangerous than smoking cigarettes. The percentages who reported use of smokeless tobacco as very dangerous were 63 percent, 59 percent, and 51 percent for fourth, fifth, and sixth graders, respectively. Apparently, elementary students tend to believe that smokeless tobacco use is more dangerous than cigarette smoking. Seven to 10 percent of fourth, fifth, and sixth graders responded "don't know" to questions about the danger of smoking cigarettes and using smokeless tobacco. This indicates about one in twelve elementary youths have not yet made up their mind about the danger of using tobacco products.

Wine coolers were thought to be the least dangerous of the four types of alcoholic beverages surveyed.

Elementary students were generally less concerned about the danger of drinking alcoholic beverages than using other substances (Figure 20). Wine coolers were thought to be the least threatening of the four beverages surveyed. Only 47 percent of fourth graders, 40 percent of fifth graders, and 31 percent of sixth graders in 1996 said it was very dangerous for kids their age to drink wine coolers. Accordingly, 11 percent of all elementary graders perceived that wine coolers were not at all dangerous while 12 percent responded "don't know," indicating they had not yet made up their mind on this subject. Both numbers were much higher than for any other substance. These results suggest that young students perceive wine coolers as the least dangerous type of alcohol to drink.

About two-thirds of all elementary students in 1996 thought inhalants were very dangerous to use.

Beer and wine were perceived as more dangerous than wine coolers among elementary students. About 52 to 55 percent of fourth graders, 47 percent of fifth graders, and 38 to 39 percent of sixth graders thought beer or wine was very dangerous to consume. The responses in perceived danger of liquor drinking suggest a higher level of concern. For example, 67 percent of fourth graders said that liquor was very dangerous, which was higher than the responses for other alcoholic beverages and tobacco products. Correspondingly, only 2 percent of fourth graders said it was not at all dangerous for kids their age to drink liquor. This pattern was also true for the fifth and sixth graders, indicating that liquor was clearly perceived as the most dangerous type of alcoholic beverage.

About two-thirds of all elementary students in 1996 thought inhalants were very dangerous to use. The percentages that reported inhalant use as very dangerous were similar across grades: 66 percent, 69 percent, and 67 percent for fourth, fifth, and sixth graders, respectively. These numbers were generally higher than for most of the other substances. Compared to the responses for inhalants, use of liquor and marijuana were identified more often as very dangerous among fourth graders. However, only use of marijuana was viewed more often as very dangerous than use of inhalants among fifth and sixth graders. Eight percent of all elementary graders also did not know how dangerous it was to use inhalants.

Seventy-eight percent of fourth graders, 82 percent of fifth graders, and 80 percent of sixth graders in 1996 thought that it was very dangerous to use marijuana, which was higher than any of the other substances surveyed. Moreover, relatively few elementary students responded "don't know" when asked about the danger of using marijuana. Only 5 to 6 percent of fourth, fifth, and sixth graders had no idea about using this drug, which was lower

Table 9 **Percentage of Texas Elementary Students Who Had Used Substances in the Past School Year, by Perceived Danger: 1996**

	Very Dangerous	Dangerous	Not Dangerous At All
Cigarettes	4%	14.0%	52%
Smokeless Tobacco	1%	3.0%	19%
Beer	5%	14.0%	44%
Wine Coolers	4%	12.0%	44%
Wine	3%	9.0%	34%
Liquor	2%	6.0%	32%
Inhalants	3%	11.0%	43%
Marijuana	1%	9.0%	39%

than for any other substance. These results indicate that elementary students were more likely to have formed an opinion about marijuana use, and that opinion tended to be negative.

Relative Danger Associated with Substance Use

Youths who believed substances were quite dangerous to use were less likely to actually use those substances. For example, only 5 percent of elementary students who thought beer was very dangerous to consume actually drank in the past school year, compared to 44 percent of those who thought beer was not dangerous at all (Table 9). Only 1 percent of elementary students who believed marijuana was very dangerous to use had actually used it in the past school year, whereas the past-year prevalence of marijuana was 39 percent for those who believed marijuana use was not dangerous at all. This correlation held true for other substances as well.

Changes in Perceptions of Danger

A lower proportion of fourth, fifth, and sixth graders in 1996 compared to those in 1992 perceived use of various substances as very dangerous to users, although slightly more fourth and fifth graders believed that it was very dangerous to use tobacco and inhalants over the past three surveys. This may indicate that elementary students have become less fearful of using substances over time; the trend of softened perceptions of the danger of substance use is also true for secondary students. The percentage of fourth graders who thought marijuana use was very dangerous decreased from 81 percent in 1992 to 80 percent in 1994 and to 78 percent in 1996. Among sixth graders, the perceived danger toward marijuana use decreased from 92 percent in 1992 to 83 percent in 1994 and to 80 percent in 1996. The softened perceptions of the danger of using marijuana among youths probably helped contribute to their sharp increases in marijuana use between 1992 and 1996.

Perceived Parental Attitudes

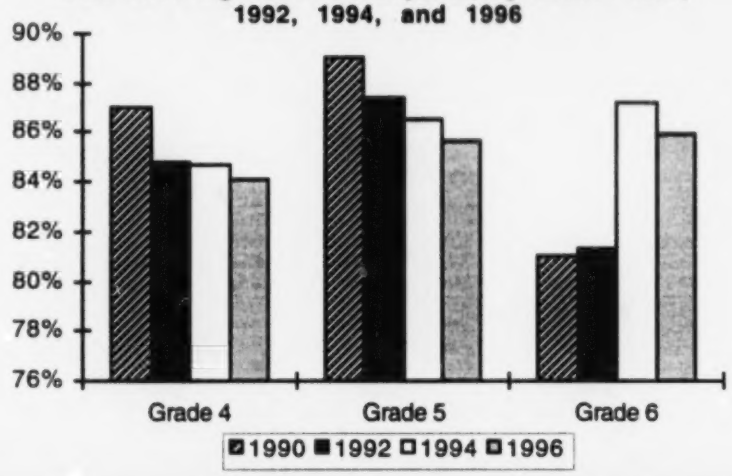
Parental attitudes toward substance use often influence their children's decisions regarding substance use. Elementary students are potentially more strongly influenced by the attitudes of their parents than are secondary students. Compared to secondary students, almost twice as many elementary students have no idea how their parents feel about kids their age using marijuana or alcohol. Among students in grades four to six, about 16 percent were not sure of the attitudes of their parents toward kids their age drinking beer, and 13 percent did not know how their parents felt about marijuana use (Table 10). For secondary students in grades seven to 12 in the 1996 survey, these figures were only 9 percent and 8 percent, respectively.

Sixth graders were more likely than fourth or fifth graders to know their parents' position on marijuana use. About 12 percent of sixth graders in 1996 said they did not know how their parents felt about using marijuana, while 14 percent of fourth graders and 13 percent of fifth graders said the same.

Table 10 **Responses of Texas Elementary Students to the Question, "How Do Your Parents Feel About Kids Your Age...": 1996**

	Don't Like It	Don't Care	Think It's Ok	Don't Know
Drinking Beer?				
All Students	80.4%	2.3%	1.0%	16.3%
Grade 4	81.4%	1.8%	1.0%	15.8%
Grade 5	81.0%	2.2%	1.0%	15.8%
Grade 6	79.0%	2.8%	1.0%	17.1%
Using Marijuana?				
All Students	85.2%	1.5%	0.5%	12.8%
Grade 4	84.1%	1.2%	0.4%	14.3%
Grade 5	85.7%	1.3%	0.4%	12.6%
Grade 6	85.9%	1.8%	0.5%	11.8%

Figure 21 **Percentage of Texas Elementary Students Who Said Their Parents Did Not Like Kids Their Age to Use Marijuana, by Grade: 1990, 1992, 1994, and 1996**



The expression of parents' attitudes continues to develop throughout the secondary population — as their children grow up, parents very likely must confront substance use by their children and make their views known.

About 80 percent of elementary students felt that their parents strongly opposed their drinking beer and 85 percent reported their parents strongly opposed marijuana use in the 1996 survey. The message that beer is not acceptable becomes less effective as students grow older. Fewer sixth graders (79 percent) reported their parents "don't like it" for kids their age to drink beer, compared to 81 percent of fourth or fifth graders. This trend continues to develop in secondary grades as well. However, more parents of sixth

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graders (86 percent) were perceived to strongly disapprove of marijuana use in comparison to the parents of fourth graders (84 percent).

While the percentage of elementary students who said their parents did not like kids their age to drink beer increased from 77 percent in 1990 to 80 percent in 1996, the disapproval rate of using marijuana remained level at 85 to 86 percent over the years. By grade, parental disapproval of marijuana use among fourth graders decreased from 87 percent in 1990 to 84 percent in 1996; the comparable range for fifth graders was 89 percent to 86 percent (Figure 21). The decrease in parental disapproval may partially account for the rise in marijuana use among fourth and fifth graders over the past four surveys. This corresponding trend, however, did not occur in the sixth grade. Part of the reason may be that the changes in the pattern of marijuana use among sixth graders were not affected by the differences of perceived parental attitudes but rather they were affected by other predictors of substance use, such as respondents' perceived danger and their friends' use of marijuana.

The parental disapproval of marijuana use among fourth graders decreased from 87 percent in 1990 to 84 percent in 1996.

Age of First Use

Alcohol is the first substance that Texas elementary school students try (Table 11). Among sixth graders who had drunk alcohol, the average age of first use was 9.5 years, which was earlier than for any other substance. Initiation of tobacco use among sixth graders occurred about 0.4 years later than alcohol use; the first use of inhalants occurred about 0.7 years later than alcohol use; and the onset of marijuana use was about 1.1 years later than alcohol use. Elementary students first try marijuana at an older average age than other substances. As with secondary students, elementary students start using licit substances earlier than they begin using illicit drugs. This observation is consistent with present views of substance use progression, which

Table 11 **Average Age of First Use of Substances in Years, by Grade: 1996**

	Grade 4	Grade 5	Grade 6
Tobacco	**8.4**	**9.2**	**9.9**
Alcohol	**8.2**	**8.9**	**9.5**
Beer	8.1	8.8	9.4
Wine Coolers	8.6	9.3	10.0
Wine	8.6	9.4	10.1
Liquor	8.7	9.5	10.3
Inhalants	**8.4**	**9.2**	**10.2**
Marijuana	**8.7**	**9.8**	**10.6**

maintain that alcohol, tobacco, and inhalants are "gateway drugs" into the continuum of substance use.[1]

Of the four alcoholic beverages surveyed, beer is the first that elementary students try. On average, sixth graders were 9.4 years old when they first drank beer. Comparable measures for wine coolers, wine, and liquor were 10.0, 10.1, and 10.3 years of age, respectively. The earlier initiation of beer drinking may result in the fact that more elementary students have consumed beer than other alcoholic beverages.

Sources of Information

The early attitudes and opinions of elementary students toward substance use are affected by many different sources. Schools are in a position to be particularly influential in the decision processes of younger students. When asked whether they had gotten information on drugs or alcohol from any school source during the past school year, 92 percent of all elementary students surveyed in 1996 said they had (Appendix C, Table C4). This figure was slightly lower than in 1990 (95 percent) and 1994 (94 percent), indicating that fewer elementary students received information about substance use from a school source over the years. Also, that figure was much lower among secondary students surveyed in 1996 (75 percent).

The percentage of students who obtained information from school sources decreased in sixth grade, initiating a decline that continues throughout secondary school.

The most likely source of information that elementary students reported in 1996 was their teachers (75 percent), followed by an assembly program or a visitor to class (63 percent). About 55 percent of the students identified a guidance counselor as an information source, and 48 percent said they had gotten information from some other school source as well.

Grade-level data showed that fourth and fifth graders were more likely to receive information from school sources than sixth graders. The percentage of students who obtained information from school sources decreased in the sixth grade, initiating a decline that continues throughout secondary school. For example, about 43 percent of sixth graders said they learned about substance use from a guidance counselor during the school year, which was fewer than in the fourth (63 percent) or fifth grade (59 percent). Virtually all school-based sources of information reflected this pattern. One possible explanation for this finding is that school districts may concentrate most of their attention on early prevention programs for fourth and fifth graders, with the number of drug and alcohol information programs actually decreasing somewhat in upper grade levels. On the other hand, students may be less receptive to school programs as they grow older and therefore may not remember to report them on the survey.

Compared to 1990, a lower proportion of elementary students in 1996 reported they learned about substance use from various school sources. For example, the percentage of students receiving information from their teachers decreased significantly from 88 percent in 1990 to 82 percent in 1994 and to

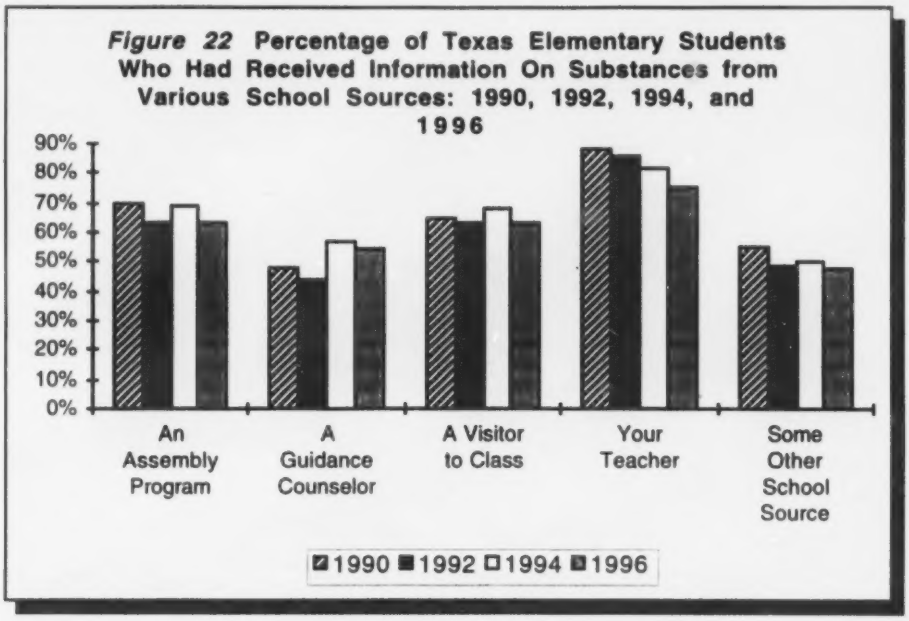

Figure 22 **Percentage of Texas Elementary Students Who Had Received Information On Substances from Various School Sources: 1990, 1992, 1994, and 1996**

75 percent in 1996 (Figure 22). The only exception was for the source of a guidance counselor, where more elementary students said they obtained information from in 1996 (55 percent) than in 1990 (48 percent).

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[1] D.B. Kandel, K. Yamaguchi, and K. Chen, "Stages of Progression in Drug Involvement from Adolescence to Adulthood: Further Evidence for the Gateway Theory," *Journal of Studies on Alcohol* 53 (September 1992): 447-457; D.B. Kandel and K. Yamaguchi, "From Beer to Crack: Developmental Patterns of Drug Involvement," *American Journal of Public Health* 83:6 (June 1993): 851-855; M.R. Torabi, W.J. Bailey, and M. Majd-Jabbari, "Cigarette Smoking as a Predictor of Alcohol and Other Drug Use by Children and Adolescents: Evidence of the 'Gateway Drug Effect'," *Journal of School Health* 63:7 (September 1993): 302-306.

Chapter 6: Conclusions

If early initiation of substance use is a risk factor for later substance abuse, then any reduction and/or delay in the early use of substances is critical.

The 1996 school survey found that among Texas elementary students, 17 percent had smoked or chewed tobacco, 30 percent had used alcohol, 10 percent had sniffed or huffed inhalants, and 4 percent had tried marijuana at least once. Although substance use is quite low among elementary students compared to those in the secondary population, it should be remembered that even low rates of use represent large numbers of students. In elementary school, many youths are exposed to alcohol and drugs for the first time. If early initiation of substance use is a risk factor for later substance abuse, then any reduction and/or delay in the early use of substances is critical.

Although the percentage of alcohol use by elementary students has decreased since 1990, alcohol remains the most frequently used substance. Heavy drinking is still of concern. About one in six elementary youths had consumed two or more wine coolers in a row at least once during the 1996 school year. Correction fluid and glue continue to be the two most popular inhalant products among elementary students; and, more inhalant users tended to have used multiple types of inhalants over the past two surveys. Grade-level patterns showed that prevalence of substance use increased by grade, with a noticeable difference in substance use between the fifth and sixth grades.

Male elementary students had prevalence rates well above those for females for all substances. The ethnicity data revealed that African American youths ranked the highest in lifetime use of alcohol, while Hispanic students reported the greatest level of tobacco, inhalants, and marijuana. Making poor grades and having conduct problems in school were each significantly related to the prevalence use of substances among elementary students. Moreover, elementary children from low-income families were more likely to use substances than those from other families.

Family structure predicted experimental use of substances, such that children living in two-parent families showed a consistent propensity to wait longer before first trying substances than their counterparts who did not live with both parents. In addition, parental attitudes toward substance use are related to their children's decisions to use substances. If parents are thought to have a permissive attitude toward substance use, then it is more likely that their children will experiment with and continue using substances.

Lifetime use of marijuana among elementary students decreased over the past two surveys, but remained twice as high as in 1992. Yet, the rise in past-year marijuana use continued in 1996. The increase in prevalence of marijuana use among elementary schoolchildren since 1992 was consistent with

Substance use behavior in the elementary grades predicts similar behavior in secondary school.

that observed in the secondary population. Possible reasons for this increase in youthful marijuana use may be the decreased perceived danger of using marijuana, the increased availability of marijuana, and the increased number of close friends who used marijuana. If it is the case that marijuana is a gateway drug to other illicit drugs, then the increase in prevalence reported by elementary students should be read as a sign of potential increases in other illicit drug use in later years.

Substance use behavior in the elementary grades predicts similar behavior in secondary school. The association of peer, parent, and school factors with self-reported substance use in this study is consistent with relationships observed among older students. These results suggest the need for early prevention and intervention efforts of substance use to be directed toward preadolescents, and the programs should take into account the impacts of peer factors as well as parent/family characteristics that may lead to the initiation and continuation of adolescent substance use.

Appendix A: Survey Instrument

TEXAS SCHOOL SURVEY OF SUBSTANCE USE

ELEMENTARY SURVEY INSTRUMENT

INTRODUCTION

This is NOT A TEST. There are no right or wrong answers. You should just answer each question by telling the truth.

No one but you will know how you answer the questions.

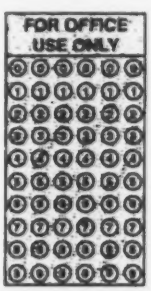
You DO NOT have to take this survey. If you do not want to answer the questions, work quietly at your desk.

Follow your teacher's instructions carefully.

NOTE: This survey asks some questions about whether you have ever drunk beer, wine coolers, wine, or liquor. **Do not count a taste or sip you may have had of someone else's drink, or wine used in a religious service.** A drink means a can or bottle of beer or wine cooler, a glass of wine, a shot of liquor (like whiskey, vodka, or gin) or a mixed drink.

DIRECTIONS

- DO NOT write your name anywhere on this booklet.
- Use a NUMBER 2 PENCIL only.
- Fill in only ONE BUBBLE for each part of a question.
- Be sure to read each question carefully.



EXAMPLE QUESTION

IN THE PAST WEEK, on how many DAYS have you used:

	Never heard of it	Not used it	1-2 days	3-4 days	5-7 days
a. Cigarettes	○	○	○	○	●
b. Snuff or Chewing Tobacco	○	○	●	○	○
c. Beer	●	○	○	○	○

CORRECT MARK ● INCORRECT MARKS ⊘ ⊗ ⊙ ◒

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1. Are you a:

Boy ○ Girl ○

2. What grade are you in?

4 ○ 5 ○ 6 ○

3. Do you live with both of you parents?

Yes ○ No ○

4. How old are you?

8 or younger ○ 9 ○ 10 ○ 11 ○ 12 ○ 13 or older ○

5. Are you?

White ○ African American ○ Mexican American ○ Asian American ○ Native American ○ Other ○

6. What grades do you usually get? (ONLY CHOOSE ONE)

Mostly A's ○ Mostly B's ○ Mostly C'c ○ Mostly D's ○ Mostly F's ○

7. Have you lived in this town for more than 3 years?

Yes ○ No ○ Don't Know ○

8. Did either of your parents graduate from college?

Yes ○ No ○ Don't Know ○

9. During the current school year, do you qualify for a free or reduced price school lunch?

Yes ○ No ○ Don't Know ○

Below is a list of things some people sniff to get high. These are called inhalants.

10. Have you EVER sniffed any of the following inhalants to get high?

(DARKEN ONE BUBBLE FOR EACH DRUG)

	Never Used	Used
a. Gasoline to get high	○	○
b. Paint thinner to get high	○	○
c. Glue to get high	○	○
d. Whiteout or Liquid Paper to get high	○	○
e. Spray paint to get high	○	○
f. Other inhalants to get high	○	○

The following questions ask about drugs people use to get high.

11 How many times have you used any of these drugs?

(DARKEN ONE BUBBLE FOR EACH DRUG)

	Never heard of it	Never used it	1-2 times	3-10 times	11 or more times
a. Cigarettes?	○	○	○	○	○
b. Snuff or Chewing Tobacco?	○	○	○	○	○
c. Beer?	○	○	○	○	○
d. Wine Coolers?	○	○	○	○	○
e. Wine?	○	○	○	○	○
f. Liquor (whiskey, vodka, gin, etc.)?	○	○	○	○	○
g. Chronies?	○	○	○	○	○
h. Inhalants (whiteout, glue, gas, etc.)?	○	○	○	○	○
i. Marijuana (pot)?	○	○	○	○	○

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12. SINCE SCHOOL BEGAN IN THE FALL, how many times have you used:

(DARKEN ONE BUBBLE FOR EACH DRUG)

	Never heard of it	Times used since school began in the fall. Never used it	1-2 times	3-10 times	11 or more times
a. Cigarettes?	○	○	○	○	○
b. Snuff or Chewing Tobacco?	○	○	○	○	○
c. Beer?	○	○	○	○	○
d. Wine Coolers?	○	○	○	○	○
e. Wine?	○	○	○	○	○
f. Liquor (whiskey, vodka, gin, etc.)?	○	○	○	○	○
g. Chromies?	○	○	○	○	○
h. Inhalants (whiteout, glue, gas, etc.	○	○	○	○	○
i. Marijuana (pot)?	○	○	○	○	○

13. How old were you when you first used:

(DARKEN ONE BUBBLE FOR EACH DRUG)

	Never heard of it	Never used it	7 or younger	8 years	9 years	10 years	11 years	12 years or older
a. Cigarettes?	○	○	○	○	○	○	○	○
b. Snuff or Chewing Tobacco?	○	○	○	○	○	○	○	○
c. Beer?	○	○	○	○	○	○	○	○
d. Wine Coolers?	○	○	○	○	○	○	○	○
e. Wine?	○	○	○	○	○	○	○	○
f. Liquor (whiskey, vodka,gin, etc.)?	○	○	○	○	○	○	○	○
g. Chromies?	○	○	○	○	○	○	○	○
h. Inhalants (whiteout, glue, gas, etc.	○	○	○	○	○	○	○	○
i. Marijuana (pot)?	○	○	○	○	○	○	○	○

14. About how many of your close friends your age use:

(DARKEN ONE BUBBLE FOR EACH DRUG)

	Never heard of it	None	Some	Most
a. Cigarettes?	○	○	○	○
b. Snuff or Chewing Tobacco?	○	○	○	○
c. Beer?	○	○	○	○
d. Wine Coolers?	○	○	○	○
e. Wine?	○	○	○	○
f. Liquor (whiskey, vodka,gin, etc.)?	○	○	○	○
g. Chromies?	○	○	○	○
h. Inhalants (whiteout, glue, gas, etc.	○	○	○	○
i. Marijuana (pot)?	○	○	○	○

15. Has anyone ever tried to give you:

(DARKEN ONE BUBBLE FOR EACH DRUG)

	Never heard of it	Yes	No
a. Cigarettes?	○	○	○
b. Snuff or Chewing Tobacco?	○	○	○
c. Beer?	○	○	○
d. Wine Coolers?	○	○	○
e. Wine?	○	○	○
f. Liquor (whiskey, vodka, gin, etc.)?	○	○	○
g. Chromies?	○	○	○
h. Inhalants (whiteout, glue, gas, etc.	○	○	○
i. Marijuana (pot)?	○	○	○

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16. When you drink alcohol (beer, wine coolers, wine or liquor), where do you get it?

(DARKEN ONE BUBBLE FOR EACH LINE)

	Don't Drink	Yes	No
a. Get it from home	○	○	○
b. Get it from friends	○	○	○
c. Get it from somewhere else	○	○	○

17. How dangerous do you think it is for kids your age to use:

(DARKEN ONE BUBBLE FOR EACH LINE)

	Never heard of it	Very dangerous	Dangerous	Not dangerous at all	Don't Know
a. Cigarettes?	○	○	○	○	○
b. Snuff or Chewing Tobacco?	○	○	○	○	○
c. Beer?	○	○	○	○	○
d. Wine Coolers?	○	○	○	○	○
e. Wine?	○	○	○	○	○
f. Liquor (whiskey, vodka, gin, etc.)?	○	○	○	○	○
g. Chromies?	○	○	○	○	○
h. Inhalants (whitout, glue, gas, etc.	○	○	○	○	○
i. Marijuana (pot)?	○	○	○	○	○

18. SINCE SCHOOL BEGAN IN THE FALL, have you learned about drugs or alcohol from:

(DARKEN ONE BUBBLE FOR EACH LINE)

	Yes	No
a. Your teacher?	○	○
b. A visitor to your class?	○	○
c. An assembly program?	○	○
d. A school counselor?	○	○
e. Someone else at school?	○	○

19. During the past year (12 months), how many times have you had two or more glasses or Bottles of these drinks in a row?
(DARKEN ONE BUBBLE FOR EACH LINE)

	Never	1 time	2 times	3 or more times
a. Beer	○	○	○	○
b. Wine Coolers	○	○	○	○
c. Wine	○	○	○	○
d. Liquor	○	○	○	○

20. Since school began in the Fall, have you skipped school when your parents didn't know?

○ Yes ○ No

21. Since school began in the Fall, have you been sent to anyone like the principal because you did something against the rules?

○ Yes ○ No

22. How do your parents feel about kids your age drinking beer?

They don't like it.	○
They don't care.	○
They think it's O.K.	○
I don't know.	○

23. How do your parents feel about kids your age using marijuana?

They don't like it.	○
They don't care.	○
They think it's O.K.	○
I don't know.	○

THANK YOU
for being a part of this important project.

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Appendix B: Prevalence Tables

Table B1 **Prevalence and Recency of Use of Substances, by Grade: Texas Elementary Students, 1990, 1992, 1994, and 1996**

	Ever Used 1990	Ever Used 1992	Ever Used 1994	Ever Used 1996	School Year 1990	School Year 1992	School Year 1994	School Year 1996
Tobacco	**21.1%**	**18.8%**	**18.9%**	**17.1%**	**13.3%**	**11.5%**	**12.0%**	**10.8%**
Grade 4	13.3%	10.8%	11.1%	9.3%	8.2%	6.5%	7.1%	5.5%
Grade 5	19.8%	18.3%	17.7%	16.3%	13.2%	11.9%	10.9%	9.9%
Grade 6	30.5%	27.4%	27.9%	25.8%	18.7%	16.1%	18.1%	17.0%
Alcohol	**41.8%**	**33.4%**	**32.6%**	**30.2%**	**28.8%**	**20.5%**	**22.6%**	**20.5%**
Grade 4	31.0%	25.2%	25.1%	21.7%	21.1%	14.7%	17.3%	14.5%
Grade 5	38.5%	28.6%	30.3%	28.6%	28.1%	18.0%	20.3%	19.0%
Grade 6	56.5%	46.4%	42.5%	40.3%	37.7%	28.8%	30.2%	28.1%
Inhalants#	**15.3%**	**16.4%**	**9.8%**	**9.8%**	**11.4%**	**10.9%**	**5.7%**	**7.1%**
Grade 4	12.7%	14.6%	8.4%	8.7%	9.5%	10.8%	4.2%	6.3%
Grade 5	9.6%	10.5%	8.0%	8.3%	7.1%	7.1%	4.8%	6.2%
Grade 6	24.0%	24.0%	13.0%	12.4%	17.8%	14.8%	8.0%	8.8%
Marijuana	**2.7%**	**1.7%**	**5.6%**	**4.0%**	**1.8%**	**1.0%**	**1.9%**	**2.7%**
Grade 4	1.1%	0.8%	3.5%	1.7%	0.7%	*	0.7%	0.9%
Grade 5	1.8%	0.9%	4.6%	2.9%	1.3%	0.6%	1.2%	1.8%
Grade 6	5.4%	3.4%	8.8%	7.3%	3.6%	2.0%	3.7%	5.4%

#Adjusted, based on all data from the survey to include all appropriate responses.
*Less than 0.5%

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Table B2 **Prevalence and Recency of Use of Substances, by Grade: Texas Elementary Students, 1996**

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**17.1%**	**10.8%**	**6.3%**	**82.9%**
Grade 4	9.3%	5.5%	3.7%	90.7%
Grade 5	16.3%	9.9%	6.4%	83.7%
Grade 6	25.8%	17.0%	8.8%	74.2%
Alcohol	**30.2%**	**20.5%**	**9.7%**	**69.8%**
Grade 4	21.7%	14.5%	7.3%	78.3%
Grade 5	28.6%	19.0%	9.6%	71.4%
Grade 6	40.3%	28.1%	12.2%	59.7%
Inhalants#	**9.8%**	**7.1%**	**2.7%**	**90.2%**
Grade 4	8.7%	6.3%	2.4%	91.3%
Grade 5	8.3%	6.2%	2.1%	91.7%
Grade 6	12.4%	8.8%	3.6%	87.6%
Marijuana	**4.0%**	**2.7%**	**1.3%**	**96.0%**
Grade 4	1.7%	0.9%	0.7%	98.3%
Grade 5	2.9%	1.8%	1.2%	97.1%
Grade 6	7.3%	5.4%	1.9%	92.7%

#Adjusted, based on all data from the survey to include all appropriate responses.

Table B3 **Prevalence and Recency of Use of Substances, by Grade: Texas Male Elementary Students, 1996**

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**20.9%**	**13.0%**	**7.8%**	**79.1%**
Grade 4	12.4%	7.2%	5.1%	87.6%
Grade 5	20.3%	12.5%	7.9%	79.7%
Grade 6	30.0%	19.5%	10.4%	70.0%
Alcohol	**34.7%**	**23.0%**	**11.7%**	**65.3%**
Grade 4	27.1%	17.9%	9.2%	72.9%
Grade 5	32.8%	21.5%	11.3%	67.2%
Grade 6	44.3%	29.8%	14.5%	55.7%
Inhalants#	**11.2%**	**7.9%**	**3.3%**	**88.8%**
Grade 4	10.7%	7.5%	3.2%	89.3%
Grade 5	9.7%	7.2%	2.5%	90.3%
Grade 6	13.3%	9.1%	4.2%	86.7%
Marijuana	**5.1%**	**3.5%**	**1.6%**	**94.9%**
Grade 4	2.4%	1.4%	1.0%	97.6%
Grade 5	3.7%	2.3%	1.3%	96.3%
Grade 6	9.4%	7.0%	2.4%	90.6%

#Adjusted, based on all data from the survey to include all appropriate responses.

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Table B4 **Prevalence and Recency of Use of Substances, by Grade: Texas Female Elementary Students, 1996**

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**13.4%**	**8.6%**	**4.9%**	**86.6%**
Grade 4	6.2%	3.8%	2.4%	93.8%
Grade 5	12.3%	7.4%	4.9%	87.7%
Grade 6	21.8%	14.6%	7.3%	78.2%
Alcohol	**25.7%**	**17.9%**	**7.7%**	**74.3%**
Grade 4	16.5%	11.1%	5.4%	83.5%
Grade 5	24.2%	16.4%	7.7%	75.8%
Grade 6	36.4%	26.4%	10.0%	63.6%
Inhalants#	**8.3%**	**6.2%**	**2.1%**	**91.7%**
Grade 4	6.7%	5.0%	1.7%	93.3%
Grade 5	6.8%	5.2%	1.6%	93.2%
Grade 6	11.5%	8.5%	3.0%	88.5%
Marijuana	**2.8%**	**1.9%**	**0.9%**	**97.2%**
Grade 4	1.0%	0.5%	0.5%	99.0%
Grade 5	2.1%	1.2%	1.0%	97.9%
Grade 6	5.3%	4.0%	1.3%	94.7%

#Adjusted, based on all data from the survey to include all appropriate responses.

Table B5 **Prevalence and Recency of Use of Substances, by Grade: Texas Anglo Elementary Students, 1996**

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**16.1%**	**10.1%**	**5.9%**	**83.9%**
Grade 4	8.5%	4.7%	3.8%	91.5%
Grade 5	15.8%	9.5%	6.3%	84.2%
Grade 6	24.0%	16.3%	7.6%	76.0%
Alcohol	**24.0%**	**15.7%**	**8.3%**	**76.0%**
Grade 4	17.2%	10.6%	6.6%	82.8%
Grade 5	22.6%	14.4%	8.2%	77.4%
Grade 6	32.4%	22.2%	10.2%	67.6%
Inhalants#	**8.1%**	**5.9%**	**2.2%**	**91.9%**
Grade 4	8.1%	5.8%	2.3%	91.9%
Grade 5	6.7%	5.0%	1.7%	93.3%
Grade 6	9.5%	6.8%	2.7%	90.5%
Marijuana	**2.5%**	**1.5%**	**1.0%**	**97.5%**
Grade 4	1.2%	0.5%	0.7%	98.8%
Grade 5	1.8%	0.8%	0.9%	98.2%
Grade 6	4.5%	3.1%	1.5%	95.5%

#Adjusted, based on all data from the survey to include all appropriate responses.

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Table B6 **Prevalence and Recency of Use of Substances, by Grade: Texas African American Elementary Students, 1996**

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**16.4%**	**9.4%**	**7.0%**	**83.6%**
Grade 4	9.5%	5.3%	4.2%	90.5%
Grade 5	15.8%	8.6%	7.1%	84.2%
Grade 6	24.1%	14.3%	9.8%	75.9%
Alcohol	**37.2%**	**24.5%**	**12.7%**	**62.8%**
Grade 4	27.8%	18.9%	8.9%	72.2%
Grade 5	35.0%	22.4%	12.6%	65.0%
Grade 6	49.0%	32.3%	16.7%	51.0%
Inhalants#	**8.0%**	**5.7%**	**2.2%**	**92.0%**
Grade 4	7.0%	5.3%	1.7%	93.0%
Grade 5	6.8%	4.7%	2.1%	93.2%
Grade 6	10.1%	7.1%	2.9%	89.9%
Marijuana	**4.1%**	**2.9%**	**1.3%**	**95.9%**
Grade 4	1.7%	0.9%	0.8%	98.3%
Grade 5	2.8%	1.7%	1.1%	97.2%
Grade 6	7.9%	6.0%	1.9%	92.1%

#Adjusted, based on all data from the survey to include all appropriate responses.

Table B7 **Prevalence and Recency of Use of Substances, by Grade: Texas Hispanic Elementary Students, 1996**

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**19.0%**	**12.6%**	**6.5%**	**81.0%**
Grade 4	9.8%	6.4%	3.4%	90.2%
Grade 5	17.3%	11.2%	6.1%	82.7%
Grade 6	30.2%	20.3%	9.9%	69.8%
Alcohol	**34.4%**	**24.5%**	**9.9%**	**65.6%**
Grade 4	24.1%	16.7%	7.4%	75.9%
Grade 5	32.0%	22.4%	9.5%	68.0%
Grade 6	47.3%	34.6%	12.7%	52.7%
Inhalants#	**12.3%**	**9.0%**	**3.4%**	**87.7%**
Grade 4	9.5%	6.9%	2.7%	90.5%
Grade 5	10.4%	8.0%	2.4%	89.6%
Grade 6	17.2%	12.1%	5.1%	82.8%
Marijuana	**5.7%**	**4.2%**	**1.5%**	**94.3%**
Grade 4	2.1%	1.4%	0.7%	97.9%
Grade 5	4.4%	2.9%	1.5%	95.6%
Grade 6	10.8%	8.4%	2.4%	89.2%

#Adjusted, based on all data from the survey to include all appropriate responses.

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Table B8 **Prevalence and Recency of Use of Substances, by Grade: Texas Elementary Students Who Reported Earning A's/B's, 1996**

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**15.3%**	**9.4%**	**6.0%**	**84.7%**
Grade 4	8.2%	4.7%	3.5%	91.8%
Grade 5	15.0%	8.8%	6.2%	85.0%
Grade 6	22.9%	14.7%	8.2%	77.1%
Alcohol	**27.9%**	**18.6%**	**9.4%**	**72.1%**
Grade 4	20.0%	12.9%	7.1%	80.0%
Grade 5	26.9%	17.5%	9.4%	73.1%
Grade 6	37.0%	25.5%	11.6%	63.0%
Inhalants#	**8.6%**	**6.3%**	**2.4%**	**91.4%**
Grade 4	7.7%	5.5%	2.2%	92.3%
Grade 5	7.5%	5.7%	1.9%	92.5%
Grade 6	10.7%	7.6%	3.1%	89.3%
Marijuana	**3.1%**	**2.0%**	**1.1%**	**96.9%**
Grade 4	1.3%	0.7%	0.6%	98.7%
Grade 5	2.5%	1.4%	1.1%	97.5%
Grade 6	5.4%	3.9%	1.6%	94.6%

#Adjusted, based on all data from the survey to include all appropriate responses.

Table B9 **Prevalence and Recency of Use of Substances, by Grade: Texas Elementary Students Who Reported Earning C's, D's, or F's, 1996**

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**25.2%**	**17.2%**	**8.0%**	**74.8%**
Grade 4	15.0%	9.7%	5.3%	85.0%
Grade 5	22.4%	15.2%	7.2%	77.6%
Grade 6	38.5%	26.8%	11.6%	61.5%
Alcohol	**40.5%**	**29.3%**	**11.1%**	**59.5%**
Grade 4	30.8%	22.6%	8.1%	69.2%
Grade 5	36.4%	25.9%	10.5%	63.6%
Grade 6	54.4%	39.5%	14.9%	45.6%
Inhalants#	**15.1%**	**10.9%**	**4.2%**	**84.9%**
Grade 4	14.2%	10.3%	3.8%	85.8%
Grade 5	11.5%	8.6%	2.9%	88.5%
Grade 6	19.8%	13.9%	5.9%	80.2%
Marijuana	**7.9%**	**5.9%**	**1.9%**	**92.1%**
Grade 4	3.4%	2.3%	1.1%	96.6%
Grade 5	4.9%	3.4%	1.5%	95.1%
Grade 6	15.4%	12.2%	3.2%	84.6%

#Adjusted, based on all data from the survey to include all appropriate responses.

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Table B10 Prevalence and Recency of Use of Substances, by Grade: Texas Elementary Students Who Lived With Both Parents, 1996

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**14.1%**	**8.9%**	**5.2%**	**85.9%**
Grade 4	7.4%	4.4%	3.0%	92.6%
Grade 5	13.3%	7.9%	5.4%	86.7%
Grade 6	21.6%	14.5%	7.1%	78.4%
Alcohol	**26.5%**	**17.8%**	**8.7%**	**73.5%**
Grade 4	19.3%	12.6%	6.7%	80.7%
Grade 5	24.8%	16.4%	8.4%	75.2%
Grade 6	35.4%	24.6%	10.9%	64.6%
Inhalants#	**9.2%**	**6.6%**	**2.6%**	**90.8%**
Grade 4	8.5%	6.1%	2.4%	91.5%
Grade 5	7.7%	5.8%	1.9%	92.3%
Grade 6	11.4%	8.0%	3.4%	88.6%
Marijuana	**3.0%**	**2.0%**	**1.0%**	**97.0%**
Grade 4	1.3%	0.7%	0.6%	98.7%
Grade 5	2.1%	1.1%	1.0%	97.9%
Grade 6	5.5%	4.1%	1.4%	94.5%

#Adjusted, based on all data from the survey to include all appropriate responses.

Table B11 Prevalence and Recency of Use of Substances, by Grade: Texas Elementary Students Not Living With Both Parents, 1996

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**23.0%**	**14.4%**	**8.5%**	**77.0%**
Grade 4	13.3%	7.9%	5.4%	86.7%
Grade 5	21.9%	13.7%	8.2%	78.1%
Grade 6	33.8%	21.8%	12.0%	66.2%
Alcohol	**37.1%**	**25.6%**	**11.6%**	**62.9%**
Grade 4	27.0%	18.5%	8.4%	73.0%
Grade 5	35.3%	23.6%	11.7%	64.7%
Grade 6	49.3%	34.7%	14.6%	50.7%
Inhalants#	**10.8%**	**7.9%**	**2.9%**	**89.2%**
Grade 4	9.1%	6.7%	2.4%	90.9%
Grade 5	9.1%	6.7%	2.4%	90.9%
Grade 6	14.3%	10.3%	4.0%	85.7%
Marijuana	**5.8%**	**4.1%**	**1.7%**	**94.2%**
Grade 4	2.5%	1.6%	0.9%	97.5%
Grade 5	4.3%	2.9%	1.4%	95.7%
Grade 6	10.7%	8.0%	2.7%	89.3%

#Adjusted, based on all data from the survey to include all appropriate responses.

Table B12 **Prevalence and Recency of Use of Substances, by Grade: Texas Elementary Students Living in Town More Than Three Years, 1996**

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**16.9%**	**10.8%**	**6.1%**	**83.1%**
Grade 4	9.1%	5.5%	3.6%	90.9%
Grade 5	15.6%	9.7%	5.9%	84.4%
Grade 6	26.1%	17.4%	8.7%	73.9%
Alcohol	**30.4%**	**20.9%**	**9.5%**	**69.6%**
Grade 4	21.6%	14.5%	7.1%	78.4%
Grade 5	28.8%	19.4%	9.4%	71.2%
Grade 6	40.8%	28.8%	12.0%	59.2%
Inhalants#	**9.8%**	**7.1%**	**2.7%**	**90.2%**
Grade 4	8.6%	6.1%	2.4%	91.4%
Grade 5	8.3%	6.3%	2.0%	91.7%
Grade 6	12.5%	8.9%	3.6%	87.5%
Marijuana	**4.0%**	**2.8%**	**1.2%**	**96.0%**
Grade 4	1.7%	0.9%	0.7%	98.3%
Grade 5	3.0%	1.8%	1.2%	97.0%
Grade 6	7.4%	5.6%	1.8%	92.6%

#Adjusted, based on all data from the survey to include all appropriate responses.

Table B13 **Prevalence and Recency of Use of Substances, by Grade: Texas Elementary Students Living in Town Less Than Three Years, 1996**

	Ever Used	School Year	Not Past Year	Never Used
Tobacco	**18.7%**	**11.2%**	**7.5%**	**81.3%**
Grade 4	10.4%	5.8%	4.6%	89.6%
Grade 5	20.5%	12.1%	8.4%	79.5%
Grade 6	25.3%	15.7%	9.6%	74.7%
Alcohol	**30.1%**	**19.4%**	**10.6%**	**69.9%**
Grade 4	23.1%	15.3%	7.7%	76.9%
Grade 5	28.7%	18.1%	10.6%	71.3%
Grade 6	38.6%	25.0%	13.6%	61.4%
Inhalants#	**9.7%**	**7.0%**	**2.8%**	**90.3%**
Grade 4	9.5%	7.0%	2.6%	90.5%
Grade 5	7.9%	5.7%	2.2%	92.1%
Grade 6	11.8%	8.2%	3.5%	88.2%
Marijuana	**3.9%**	**2.5%**	**1.4%**	**96.1%**
Grade 4	1.9%	1.2%	0.7%	98.1%
Grade 5	2.6%	1.4%	1.2%	97.4%
Grade 6	7.1%	4.8%	2.3%	92.9%

#Adjusted, based on all data from the survey to include all appropriate responses.

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Appendix C: Additional Tables

Table C1 **Percentage of Texas Elementary Students Who Had Ever Used Specific Inhalants, 1996**

	Ever Used	Never Used
Correction Fluid, Liquid Paper		
All Students	3.6%	96.4%
Grade 4	2.2%	97.8%
Grade 5	2.7%	97.3%
Grade 6	5.4%	94.6%
Gasoline		
All Students	2.3%	97.7%
Grade 4	2.2%	97.8%
Grade 5	2.3%	97.7%
Grade 6	2.4%	97.6%
Glue		
All Students	3.4%	96.6%
Grade 4	3.8%	96.2%
Grade 5	3.1%	96.9%
Grade 6	3.4%	96.6%
Paint Thinner		
All Students	1.8%	98.2%
Grade 4	1.8%	98.2%
Grade 5	1.5%	98.5%
Grade 6	2.0%	98.0%
Spray Paint		
All Students	2.8%	97.2%
Grade 4	2.5%	97.5%
Grade 5	2.3%	97.7%
Grade 6	3.3%	96.7%
Other Inhalants		
All Students	4.6%	95.4%
Grade 4	3.5%	96.5%
Grade 5	3.6%	96.4%
Grade 6	6.5%	93.5%

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Table C2 **Texas Elementary Student Responses to the Question, "About How Many of Your Close Friends Use...", 1996**

	Never Heard Of	None	Some	Most
Tobacco (Cigarettes, Smokeless Tobacco)				
All Students	2.0%	67.3%	26.5%	4.3%
Grade 4	3.0%	78.2%	16.6%	2.2%
Grade 5	1.8%	69.3%	25.6%	3.3%
Grade 6	1.2%	55.9%	35.9%	7.0%
Cigarettes				
All Students	3.1%	68.0%	25.1%	3.8%
Grade 4	4.8%	78.3%	15.1%	1.8%
Grade 5	2.9%	70.1%	24.1%	2.9%
Grade 6	1.8%	57.1%	34.7%	6.4%
Smokeless Tobacco				
All Students	4.0%	86.9%	8.0%	1.2%
Grade 4	6.9%	87.1%	5.2%	0.7%
Grade 5	3.2%	88.3%	7.5%	1.0%
Grade 6	2.0%	85.5%	10.8%	1.7%
Alcohol (Beer, Wine Coolers, Wine, Liquor)				
All Students	1.5%	63.2%	27.5%	7.9%
Grade 4	2.1%	72.5%	20.9%	4.5%
Grade 5	1.4%	65.2%	26.9%	6.5%
Grade 6	1.0%	53.2%	33.9%	12.0%
Beer				
All Students	1.7%	70.7%	22.7%	4.9%
Grade 4	2.4%	78.0%	16.6%	2.9%
Grade 5	1.6%	73.0%	21.4%	4.0%
Grade 6	1.1%	62.4%	29.1%	7.5%
Wine Coolers				
All Students	5.8%	71.2%	18.2%	4.8%
Grade 4	9.5%	77.2%	11.3%	2.1%
Grade 5	5.3%	73.7%	17.0%	4.0%
Grade 6	2.9%	63.9%	25.3%	7.9%
Wine				
All Students	2.4%	82.0%	13.0%	2.6%
Grade 4	3.6%	86.8%	8.4%	1.2%
Grade 5	2.2%	83.9%	11.7%	2.2%
Grade 6	1.6%	76.1%	18.2%	4.1%

Table C2 **Texas Elementary Student Responses to the Question, "About How Many of Your Close Friends Use...", 1996 (Cont.)**

	Never Heard Of	None	Some	Most
Liquor				
All Students	5.9%	82.7%	9.2%	2.2%
Grade 4	10.5%	84.4%	4.2%	0.9%
Grade 5	5.1%	85.4%	7.8%	1.6%
Grade 6	2.6%	78.8%	14.8%	3.9%
Inhalants				
All Students	5.8%	81.5%	10.2%	2.4%
Grade 4	9.9%	83.0%	6.0%	1.1%
Grade 5	5.1%	84.1%	9.0%	1.8%
Grade 6	2.8%	78.0%	15.0%	4.2%
Marijuana				
All Students	5.7%	82.1%	9.0%	3.3%
Grade 4	10.6%	84.2%	3.9%	1.4%
Grade 5	4.4%	85.7%	7.6%	2.2%
Grade 6	2.7%	77.1%	14.5%	5.8%

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Table C3 **Texas Elementary Student Responses to the Question, "How Dangerous Do You Think It Is For Kids Your Age to Use...", 1996**

	Never Heard Of	Very Dangerous	Dangerous	Not At All Dangerous	Do Not Know
Tobacco (Cigarettes, Smokeless Tobacco)					
All Students	1.3%	65.3%	26.1%	1.8%	5.5%
Grade 4	2.0%	72.6%	18.5%	1.2%	5.7%
Grade 5	1.2%	66.8%	25.5%	1.4%	5.0%
Grade 6	0.8%	57.6%	33.3%	2.6%	5.8%
Cigarettes					
All Students	2.4%	52.2%	35.1%	2.4%	7.9%
Grade 4	3.7%	61.0%	26.5%	1.4%	7.4%
Grade 5	2.1%	53.3%	35.3%	2.0%	7.4%
Grade 6	1.5%	43.4%	42.6%	3.8%	8.7%
Smokeless Tobacco					
All Students	2.8%	57.3%	28.4%	2.4%	9.1%
Grade 4	5.1%	62.7%	21.1%	1.8%	9.2%
Grade 5	2.1%	59.4%	28.3%	1.9%	8.3%
Grade 6	1.3%	50.7%	34.9%	3.3%	9.8%
Alcohol (Beer, Wine Coolers, Wine, Liquor)					
All Students	0.9%	67.7%	23.4%	2.8%	5.3%
Grade 4	1.3%	74.1%	17.3%	1.9%	5.4%
Grade 5	0.7%	69.0%	23.0%	2.5%	4.8%
Grade 6	0.7%	60.8%	29.1%	3.8%	5.5%
Beer					
All Students	1.0%	45.6%	38.3%	6.1%	8.9%
Grade 4	1.4%	51.6%	33.1%	4.5%	9.5%
Grade 5	0.9%	47.0%	38.5%	5.4%	8.3%
Grade 6	0.7%	39.3%	42.7%	8.3%	9.0%
Wine Coolers					
All Students	5.0%	38.8%	33.2%	10.6%	12.4%
Grade 4	8.2%	46.7%	26.9%	6.2%	12.1%
Grade 5	4.4%	40.0%	33.6%	9.8%	12.2%
Grade 6	2.7%	30.9%	38.3%	15.2%	12.9%
Wine					
All Students	1.4%	46.0%	34.7%	7.0%	10.8%
Grade 4	2.3%	54.6%	28.4%	4.3%	10.5%
Grade 5	1.1%	47.1%	35.2%	6.5%	10.1%
Grade 6	0.9%	37.8%	39.7%	9.8%	11.8%

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Table C3 **Texas Elementary Student Responses to the Question, "How Dangerous Do You Think It Is For Kids Your Age to Use...", 1996 (Cont.)**

	Never Heard Of	Very Dangerous	Dangerous	Not At All Dangerous	Do Not Know
Liquor					
All Students	4.3%	62.8%	22.9%	2.2%	7.9%
Grade 4	7.8%	67.4%	15.7%	1.2%	7.9%
Grade 5	3.5%	64.6%	22.9%	1.9%	7.1%
Grade 6	1.9%	57.1%	29.2%	3.4%	8.5%
Inhalants					
All Students	3.9%	67.2%	18.7%	2.4%	7.8%
Grade 4	7.0%	66.3%	15.9%	1.9%	8.9%
Grade 5	3.2%	68.7%	18.8%	2.2%	7.2%
Grade 6	1.7%	66.7%	21.1%	3.1%	7.4%
Marijuana					
All Students	3.9%	80.0%	9.3%	1.6%	5.2%
Grade 4	7.5%	77.9%	7.9%	0.8%	5.8%
Grade 5	2.9%	82.4%	8.9%	1.2%	4.5%
Grade 6	1.6%	79.7%	10.8%	2.6%	5.4%

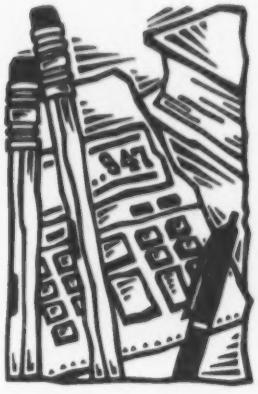
Table C4 **Texas Elementary Student Responses to the Question, "Since School Began in the Fall, Have You Learned About Drugs or Alcohol From the Following School Sources...", 1990, 1992, 1994, and 1996**

	1990	1992	1994	1996
An Assembly Program				
All Students	70%	63%	69%	63%
Grade 4	70%	67%	70%	64%
Grade 5	75%	67%	70%	68%
Grade 6	64%	55%	67%	58%
A Guidance Counselor				
All Students	48%	44%	57%	55%
Grade 4	50%	51%	68%	63%
Grade 5	51%	44%	58%	59%
Grade 6	41%	38%	46%	43%
Visitor to Class				
All Students	65%	63%	68%	63%
Grade 4	62%	62%	66%	60%
Grade 5	72%	73%	74%	72%
Grade 6	59%	53%	64%	57%
Your Teacher				
All Students	88%	86%	82%	75%
Grade 4	88%	85%	84%	76%
Grade 5	87%	86%	84%	75%
Grade 6	NA	NA	78%	74%
Some Other School Source				
All Students	55%	49%	50%	48%
Grade 4	57%	51%	52%	48%
Grade 5	56%	51%	50%	49%
Grade 6	49%	46%	49%	46%
Any School Source				
All Students	95%	93%	94%	92%
Grade 4	97%	95%	94%	91%
Grade 5	98%	97%	96%	94%
Grade 6	90%	88%	93%	90%

NA: Not Available

CG

Texas Commission on
Alcohol and Drug Abuse



Texas School Survey of Substance Use Among Students: Grades 4-6

Executive Summary
1996

CG0296.91

Texas School Survey of Substance Use Among Students: Grades 4-6

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Executive Summary

Introduction

Since its inception in 1988, the Texas School Survey has been a biennial collaborative effort between the Texas Commission on Alcohol and Drug Abuse (TCADA) and the Public Policy Research Institute (PPRI) at Texas A&M University to collect and analyze information on substance use among Texas youths. The statewide school survey monitors trends in substance use among public school students, identifies emerging problem areas, and serves as a basis of comparison for local school surveys which are conducted annually by various school districts throughout the state.

Although the survey of secondary students began in 1988, statewide data on elementary students was not gathered until 1990. The 1996 Texas School Survey results for elementary students were based on the responses of 68,239 students in fourth through sixth grades. In addition to the prevalence patterns of alcohol and drug use, this study addresses aspects of peer, parent, and school influences on substance use behaviors at a very early age when prevention and intervention is most effective.

The 1996 Texas School Survey of Substance Use Among Students: Grades 4-6 is based on the responses of 68,239 students.

General Results

Comparison to the 1996 Secondary Survey

- Texas elementary students in 1996 were about one-half as likely as Texas secondary students to report lifetime use of alcohol and one-third as likely to report lifetime use of tobacco.
- Only 4 percent of the elementary students had ever used marijuana, compared to 31 percent of secondary students.
- Compared to secondary students, more elementary students have no idea how their parents feel about substance use.

In 1996, one-quarter of Texas students in grades four through six used some type of substance.

Drug-Specific Patterns of Use

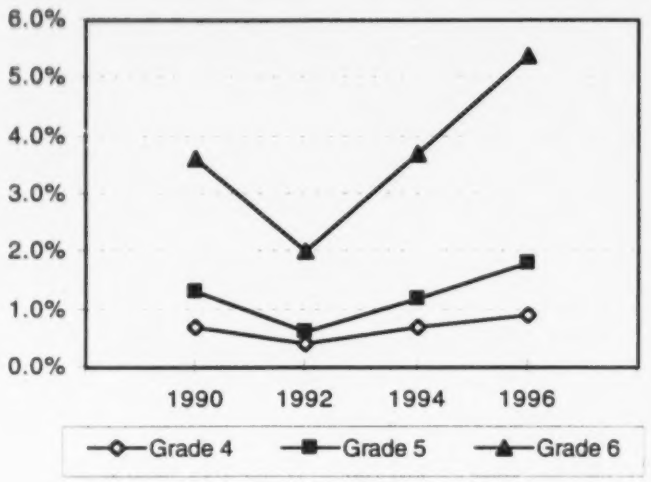
- Table 1 compares the lifetime and past-year use of substances for students in grades four through six during the past four survey years.
- In 1996, one-quarter of elementary school students in Texas used some type of substance —tobacco, alcohol, marijuana, and/or inhalants.
- Alcohol is the most widely used substance among Texas elementary students followed by tobacco. In 1996, slightly less than one-third of the students in grades four through six had ever drunk alcohol. Compared to 1994, fewer students reported past-year alcohol use. Some 15 percent of fourth graders, 19 percent of fifth graders, and 28 percent of sixth graders had consumed alcohol during the past school year.
- Heavy drinking is still of concern. The survey data show that 16 percent of elementary students had drunk two or more beers in a row at least once during the 1996 school year.

Table 1. **Prevalence and Recency of Use of Substances by Grade, Texas Elementary Students: 1990, 1992, 1994, and 1996**

	Ever Used 1990	Ever Used 1992	Ever Used 1994	Ever Used 1996	*School Year 1990*	*School Year 1992*	*School Year 1994*	*School Year 1996*
Tobacco	**21.1%**	**18.8%**	**18.9%**	**17.1%**	**13.3%**	**11.5%**	**12.0%**	**10.8%**
Grade 4	13.3%	10.8%	11.1%	9.3%	8.2%	6.5%	7.1%	5.5%
Grade 5	19.8%	18.3%	17.7%	16.3%	13.2%	11.9%	10.9%	9.9%
Grade 6	30.5%	27.4%	27.9%	25.8%	18.7%	16.1%	18.1%	17.0%
Alcohol	**41.8%**	**33.4%**	**32.6%**	**30.2%**	**28.8%**	**20.5%**	**22.6%**	**20.5%**
Grade 4	31.0%	25.2%	25.1%	21.7%	21.1%	14.7%	17.3%	14.5%
Grade 5	38.5%	28.6%	30.3%	28.6%	28.1%	18.0%	20.3%	19.0%
Grade 6	56.5%	46.4%	42.5%	40.3%	37.7%	28.8%	30.2%	28.1%
Inhalants*	**15.3%**	**16.4%**	**9.8%**	**9.8%**	**11.4%**	**10.9%**	**5.7%**	**7.1%**
Grade 4	12.7%	14.6%	8.4%	8.7%	9.5%	10.8%	4.2%	6.3%
Grade 5	9.6%	10.5%	8.0%	8.3%	7.1%	7.1%	4.8%	6.2%
Grade 6	24.0%	24.0%	13.0%	12.4%	17.8%	14.8%	8.0%	8.8%
Marijuana	**2.7%**	**1.7%**	**5.6%**	**4.0%**	**1.8%**	**1.0%**	**1.9%**	**2.7%**
Grade 4	1.1%	0.8%	3.5%	1.7%	0.7%	0.4%	0.7%	0.9%
Grade 5	1.8%	0.9%	4.6%	2.9%	1.3%	0.6%	1.2%	1.8%
Grade 6	5.4%	3.4%	8.8%	7.3%	3.6%	2.0%	3.7%	5.4%

* Adjusted, based on all data from the survey to include all appropriate responses.

Figure 1. **Trends in Past-Year Use of Marijuana Among Texas Elementary Students: 1990, 1992, 1994, and 1996**



Substance use increased by grade, with sixth graders two to four times more likely to use tobacco, alcohol, and marijuana than fourth graders.

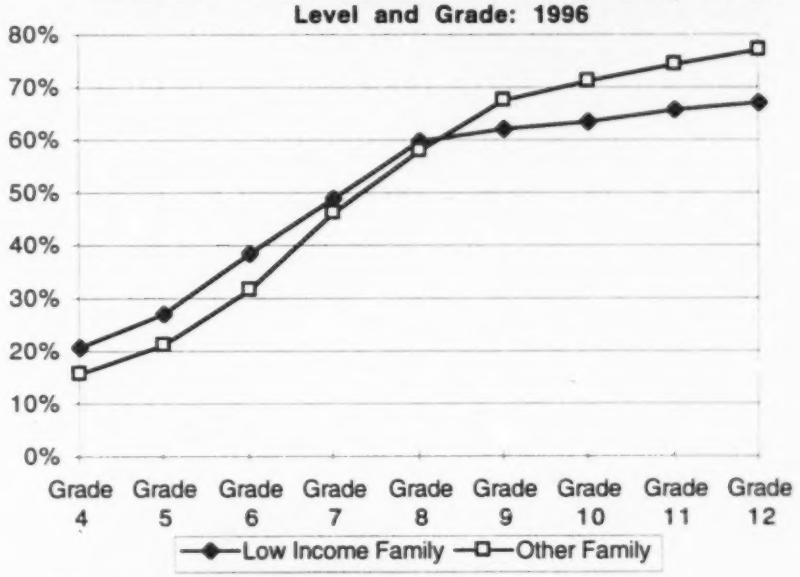
- Both lifetime and past-year use of tobacco among elementary students decreased from 1994 to 1996.
- Unlike secondary school students, lifetime marijuana use among elementary students decreased from 6 percent in 1994 to 4 percent in 1996. However, past-year use of marijuana among elementary students increased again in 1996 to 3 percent, continuing a trend that began in 1992.
- Sixth graders showed a large increase in past-year use of marijuana from 2 percent in 1992 to 5 percent in 1996 (see Figure 1).
- Prevalence of substance use increased with grade level. Sixth graders were two to four times more likely to have ever used tobacco, alcohol, and marijuana than fourth graders.
- Nine percent of fourth graders, 8 percent of fifth graders, and 12 percent of sixth graders had ever used inhalants. Correction fluid and glue continue to be the two most popular inhalants.

As students get older, girls increase their substance use at a faster rate than boys.

Demographic Variables and Substance Use

- Although male elementary students were more likely than female students to use all substances, past school year use of marijuana for females doubled between 1994 and 1996. As the students get older, girls increase their substance use at a faster rate than boys.
- Family income is related to substance use among elementary students. Children from low income families were more likely to use substances than those from other families, although this pattern is not seen among secondary students (see Figure 2). About 21 percent of fourth graders who qualified for a free or reduced-price lunch had used substances during the past year, compared to 16 percent of those who did not qualify.
- Elementary students who lived with two parents were less likely to use substances than those who lived in other family situations.

Figure 2. **Percentage of Students Who Had Used a Substance* in the Past School Year, by Family Income Level and Grade: 1996**



* Tobacco, alcohol, inhalants, and/or marijuana

Note: Data for grades seven through 12 is based on the 1996 Secondary School Survey.

Students who earned grades of C or lower reported two or three times as much substance use as students who earned A's and B's.

- There is a noticeable difference in substance use between the fifth and sixth grades. This phenomenon may be partly because many sixth graders attend middle school campuses where they are exposed to substance use by older students. Moreover, as sixth graders become increasingly independent, they are more inclined to experiment with substances than younger students.
- Students who earned grades of C or lower reported two or three times as high a prevalence for all substances as students who earned A's and B's.
- African-American youths ranked highest in lifetime use of alcohol, and Hispanics reported the highest levels of tobacco, inhalant, and marijuana use.
- African-American students showed the greatest decrease of any ethnic group in lifetime alcohol use from 1994 (45 percent) to 1996 (37 percent) —a decrease of eight percentage points. Similar patterns held for past-year alcohol use.

Other Factors Related to Substance Use

- Students who had been sent to the principal or who had cut class were more likely to use substances than other students.

Approximately 35 percent of elementary students said that some or most of their close friends drank alcohol.

- Approximately 35 percent of elementary students said that some or most of their close friends drank alcohol, 13 percent said that at least some of their close friends used inhalants, and 12 percent said that at least some of their close friends used marijuana. The extent of peer use not only gives some indication of a student's opportunity to use substances but also indicates a high level of peer pressure as well.
- Some 28 percent of elementary students had been offered cigarettes or smokeless tobacco, 33 percent had been offered alcohol, and 10 percent had been offered marijuana.
- Wine coolers were thought to be the least dangerous of the four types of alcoholic beverages surveyed.

Other Factors Related to Substance Use (Cont.)

Three-fourths of elementary students said they got most of their information about substances from their teachers.

- About two-thirds of the students thought inhalants were very dangerous to use, while 80 percent thought that marijuana was very dangerous.
- The average age of first use was lowest for alcohol, ranging from 8.2 for fourth graders to 9.5 for sixth graders (see Table 2).
- More than 80 percent of elementary students felt that their parents strongly opposed their drinking beer, and 85 percent said their parents were strongly opposed to marijuana use.
- Elementary school students were most likely to get information about substances from school sources; however, this reliance on school information declined from sixth grade through high school. Three-fourths of elementary students said they got most of their information about substances from their teachers.

Table 2. **Average Age of First Use of Substances In Years, by Grade: 1996**

	Grade 4	Grade 5	Grade 6
Tobacco	8.4	9.2	9.9
Alcohol	8.2	8.9	9.5
Beer	8.1	8.8	9.4
Wine	8.6	9.3	10.0
Wine Coolers	8.6	9.4	10.1
Liquor	8.7	9.5	10.3
Inhalants	8.4	9.2	10.2
Marijuana	8.7	9.8	10.6

Conclusions

Although rates of substance use among elementary students seem low, those low rates translate into large numbers of students.

- Although rates of substance use among elementary students are fairly low, it should be remembered that these low percentages translate into large numbers of students. For example, by translating the rates of use into actual numbers, it is estimated that about 77,000 Hispanic elementary students, 65,000 Anglo elementary students, and 30,000 African-American elementary students consumed alcohol in some form within the past year.
- Results from the 1996 survey suggest that prevention efforts should be directed toward preadolescents and take into account factors such as peer use and parent/family characteristics that may lead to the initiation and continuation of adolescent substance abuse.